



REDISCOVERING THE BALANCE SHEET

A Corporate Financial Reporting Theory Perspective

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To the memory of my father

Late Bibhuti Bhusan Basu

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Senate House, Kolkata 700073

BCU 3307

Published : February, 2003

Ges 3458

Price : Rs. 250



Printed in India by Sri A. K. Basu, DSA in Commerce, University of Calcutta, at Ajanta Printers, 7B, Sitaram Ghosh Street, Kolkata-700 009 and published by him on behalf of the University of Calcutta.

Preface

This book is an exercise in corporate financial reporting theory. It is about the rediscovery of the balance sheet. To be more specific, the book is about the rediscovery of the balance sheet theory of accounting. It is about why and how the rediscovery is taking place and how that phenomenon is changing the way financial reporting information is generated. Corporate financial reporting theory is a subset of general accounting theory with the former existing at a lower level of generalization than the latter. The main function of this theory is to set out the system of abstract reasoning that should underlie the preparation and presentation of corporate financial statements. One of the central premises of the book is that high quality corporate financial reporting is of fundamental economic importance in a market-driven economy and that, achieving this, requires a firm commitment to solid theoretical foundations. The balance sheet theory of accounting is founded on the notion that the balance sheet is the dominant financial statement and others are subordinate to it.

The balance sheet reigned supreme until the first quarter of the twentieth century. Prior to the 1930s the profit and loss account was of minor significance. In the 1930s the profit and loss account rose to prominence, thereby displacing the balance sheet in importance. Since then it has dominated financial reporting theory and practice. It is this dominance that is now being called into question. Efforts are being made to shift the focus of attention from the profit and loss account to the balance sheet. Accounting standard-setting bodies around the world have already started promoting the balance sheet as the foundation of their pronouncements. They have developed their conceptual frameworks based upon the notion of the primacy of the balance sheet. Assets and liabilities constitute the building blocks of these frameworks. Accounting standard-setting is now being driven by the dictates of these conceptual frameworks. Thus, the balance sheet is making a comeback; it is coming once again to take the centre-stage in corporate financial accounting and reporting.

The profit and loss account approach focuses on revenues and expenses and it is governed by the definitions of those two elements. Under this approach, profit is computed by periodic matching of revenues and expenses. It is this matching process which determines the figures to be put on the balance sheet. Thus, the balance sheet

becomes, to all intent and purposes, subservient to the profit and loss account. The profit and loss account approach has so far failed to deliver a rigorous basis for addressing conflicting and complex financial accounting and reporting issues. It has so far failed to provide a coherent and consistent basis for defining the elements of financial statements. Revenues and expenses are nebulous concepts; they have no real world referent. With such nebulous concepts it is difficult to come up with a theoretical framework on which the architecture of sound accounting practice can be constructed.

The balance sheet approach offers a different perspective. Under this approach, the parameters of income or profit are defined in terms of the parameters of wealth. In the balance sheet driven system, the key financial statement elements are assets and liabilities. The definitions of these two elements are critical because the definitions of the components of profit are derived from them. Profit under the balance sheet approach is defined in terms of changes in net assets (ie, assets less liabilities). The balance sheet approach does not allow the matching notion to justify the deferring of costs that do not involve future economic benefits. The asset-liability view is underpinned by economic theory. It adopts a capital maintenance approach to profit suggested by economists. According to this approach, profit results only after capital has been maintained. That is, asset growth is the essence of profit. Since assets and liabilities are real world objects, they are capable of providing a basis for considering all aspects of generation of financial reporting information integratively.

The balance sheet view has demonstrated its usefulness and merits. It has helped place corporate financial reporting theory on a sounder footing. It has helped deliver new visions and new ways of looking at things. Already, the balance sheet view has brought about significant changes in the way corporate financial reporting rules are formulated and corporate financial reporting information is generated. The visibility of assets and liabilities has increased, and many out-of-date accounting practices have been eliminated. Value-based accounting has replaced cost-based accounting in many areas of generation of financial reporting information. The role of matching has been restricted and this has significantly curtailed the scope of manipulation of profit. But the balance sheet model still has many difficult questions to answer and many difficult problems to solve. It has to develop appropriate contexts necessary for addressing explosive issues of accounting for knowledge-based intangibles, innovative financial instruments, share-based payments and executory contracts.

The book is based on a research I have conducted under the Special Assistance Programme (UGC) of the Department of Commerce, University of Calcutta. I am grateful to the authority for allowing me to work on this highly conceptual topic and assuming the entire financial burden of the project. Numerous people have been very helpful, to whom I am deeply grateful. My gratitude goes first and foremost to Professor Bhabatosh Banerjee, co-ordinator of the DSA Programme, who in numerous capacities has provided valuable support. My colleagues in the Department have provided much appreciated support and challenge to my thinking. Some of them have been very helpful in developing the content and ideas that are at the heart of the study. I would like to thank them all.

I have had the valuable opportunity of refining my ideas by presenting sections of my work at seminars and conferences and I am grateful to the participants at those seminars and conferences for their valuable comments. I also acknowledge my debt to Dr Sarmistha Banerjee (Department of Business Management, University of Calcutta), Ms Tanupa Chakraborty (Department of Commerce, University of Calcutta), Dr. Debasis Bagchi (B. E. College, Howrah) and Sri Radhanath Pyne (S. A. Jaipuria College, Kolkata) for reading and advising on the manuscript.

I would like to express my deep gratitude to the two official reviewers, Professor Asish Kumar Bhattacharyya (Indian Institute of Management Calcutta) and Professor Shirin Rathore (University of Delhi South Campus) for valuable comments and suggestions. But the responsibility for what has emerged is mine.

My special thanks go to M/s Ajanta Printers for completing the printing job within a very short time. Finally, I wish to record my thanks to my wife Krishna, whose continuous inspiration and support were essential to my undertaking and completing the project. Also my appreciation to my nephew Master Aritra Basu for his quietness and patience during the time I was working on the preparation of the project report.

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28 February 2003

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CHAPTER ONE

Introduction and Background

The issue as to whether corporate financial reporting should have a balance sheet or a profit and loss account orientation has long been discussed and debated. This debate regarding the primacy of the balance sheet or the profit and loss account has stemmed from another long-standing and deep-rooted conceptual debate as to whether the computation of accounting profit in income¹ should be dependent upon the computation of capital or, conversely, whether the computation of capital should be driven by the computation of profit. Under the former approach, profit is computed based on how capital is computed; while under the latter approach capital is computed based on how profit is computed. These two alternative approaches to the measurement of profit and capital are referred to in financial reporting literature as the *asset-liability* approach and the *revenue-expense* approach, respectively. When financial results are computed based on the asset-liability approach, the balance sheet becomes the dominant financial statement. In this scheme, the values in the profit and loss account are determined by the balance sheet. But when profit computation is based on the revenue-expense approach, the profit and loss account becomes the centre of interest and the balance sheet is relegated to a position of secondary importance. In this system, the balance sheet emerges as a by-product of the process of profit measurement. The real implications of the two alternative approaches for the generation of corporate financial reporting information may not be readily apparent to those who are not fully conversant with the intricacies of operation of the corporate financial accounting and reporting system. But to those possessing expert knowledge in the subject the two approaches represent completely different ways of thinking about accounting issues. The difference that exists between the two approaches is indeed a fundamental difference which lies at the very heart of corporate financial accounting and reporting. It affects the way that the elements of the basic financial statements are defined and the way specific financial reporting issues are addressed. In the asset-liability oriented system, the focus is on the elements of the balance sheet, which are defined independently of the elements of the profit and loss account. Since the profit and loss account is

subordinate to the balance sheet, the elements of the former are determined by the elements of the latter. The revenue-expense approach offers a different perspective. It places primacy on revenues and expenses; the elements of the balance sheet are derived as a by-product of the elements of the profit and loss account. Mathematically, the two approaches should arrive at the same destination. But that may not happen in real practice. In extremely simple cases, the two approaches may lead to identical conclusions concerning the financial position and performance of the enterprise but when situations are complex, they may give rise to dissimilar results. For example, if the entire operating cycle of the enterprise occurs within one accounting period, both approaches will yield the same recording of profit and capital. But if that does not happen, that is, if the operating cycle of the enterprise extends over several accounting periods, the results generated based on the application of the asset-liability approach may differ materially from those generated based on the application of the other approach. The main reason why this happens so is that the two approaches offer different treatments with regard to the recognition and measurement of incomplete performance at the end of the accounting period.

The corporate financial reporting system, as it currently exists, is basically a profit and loss account-driven system. It is designed to put emphasis on the rules of computation of periodic profit. Under this system, the accountant first determines what figures he should report on the profit and loss account and then adjusts the balance sheet amounts accordingly. Corporate financial accounting reports are prepared according to generally accepted accounting principles (GAAP), which represent the various rules, practices, procedures, and methods that have evolved over time in response to the need for regulating the generation of corporate financial reporting information. The major elements of the GAAP prevailing at the present time have their origin in the idea that the profit and loss account takes the first place of interest in corporate financial accounting and reporting. The profit and loss account has dominated corporate financial accounting and reporting for more than 70 years. The balance sheet reigned supreme until the middle of the second quarter of the twentieth century when it was demoted in favour of the profit and loss account. With the emergence of the matching-attaching paradigm² in the 1930s the profit and loss account rose to prominence by displacing the balance sheet in importance. Since then it has been occupying the central position of attention in the corporate financial accounting and reporting system. But the pre-

eminence of the profit and loss account is now being called increasingly into question. Recently there has been a resurgence of interest in the role of the balance sheet as the foundation of corporate financial accounting and reporting. This interest reflects dissatisfaction with the profit and loss account, which has failed to provide an adequate conceptual basis for delivering a scheme of interrelated and internally consistent ideas and concepts on the manner by which the function of generation of corporate financial reporting information can be understood or realized. There is now increasing awareness that the profit and loss account approach is incapable of providing a logical starting point for addressing the complex financial accounting and reporting issues businesses are now being required to tackle in a highly dynamic and rapidly changing environment. Another downside of the profit and loss account approach is that it lacks a clearly defined concept of profit. Under this approach, profit is computed according to some specified accounting rules rather than by the application of any logically developed concept. According to current thinking, if meaningful financial reporting is to take place, the preparation and presentation of financial statements should be based on a solid theoretical foundation. The balance sheet approach, it is being thought, is capable of providing a basis for the development of such a theoretical foundation. This realization has prompted many to promote measures for bringing the balance sheet back to take the centre-stage in corporate financial accounting and reporting. The leading accounting standard-setting bodies of the world have already recognized the pre-eminence of the balance sheet in the conceptual frameworks they have developed in recent years with the objective of providing a logical foundation for deriving appropriate financial accounting and reporting standards. The balance sheet focus is clearly evident in many of the new accounting standards that these bodies have promulgated during the recent years. It seems that a paradigm shift in corporate financial reporting is in the offing; the balance sheet is poised to take over from the profit and loss account.

In the profit and loss account-driven system of corporate financial reporting, periodic profit is computed by looking at transactions. The underlying premise of the system is that flows are more important than stocks and that profit can best be measured in terms of inflows and outflows of resources. The most important part of the entire system is the principle of matching. According to this principle, the revenues recognized during the accounting period should be matched with the costs incurred in generating those revenues. Profit is the residue which results from matching revenues and costs. Revenues reflect

accomplishments and costs represent efforts. Hence matching actually involves associating efforts and accomplishments. At first glance, the logic seems compelling. But as the matching principle is subjected to a deeper scrutiny, the logic begins to crumble. The key assumption underlying the principle is that costs can be related to products or periods based on some discernible positive correlation. But that may not be a valid assumption in all cases. In many cases it becomes difficult to determine how different cost inputs contribute to the generation of output. This is why costs are often allocated based on some arbitrarily determined rules and procedures. In many cases personal value judgements and preferences play a very crucial role in determining whether a cost is applicable or inapplicable to the revenue recognized during a given period. The matching principle requires the balance sheet to accommodate many debit and credit balances that lack any interpretative quality; they are simply the by-product of the process of matching revenues and expenses. Matching has the effect of reducing the balance sheet to merely a statement of residuals or sheet of balances. The ability of such a balance sheet to provide meaningful information as to the financial condition or health of the enterprise cannot but be limited.

The matching approach lacks analytical rigour. It is difficult to deduce sound accounting rules based on the idea of matching revenues and expenses. Underlying the matching approach is the model of a business firm which seems to be very simple, simple enough to be encapsulated within a fixed framework. It assumes that the investments that are made in one period can conveniently be matched with accomplishments in a subsequent period. This simple model is no longer operative at the present time. Today's business enterprises are very complex economic entities and they operate in an environment in which everything is in a state of flux. In this environment in which nothing is fixed enterprises are required to constantly change their investment policies, patterns, and strategies in order to ensure their survival and growth. The matching approach is unable to cope with this new economic reality of the modern business world.

Another weakness of the matching-based approach is that it has a rule-making bias. As new problems arise, efforts are made to solve those problems by formulating some additional new rules. The ultimate effect of this is the proliferation of accounting rules. As a result, corporate financial reporting is eventually reduced to reporting by rules. Moreover, since these rules are not formulated based on any sound theory, they often lack coherence and consistency. The

proliferation of rules becomes a source of great trouble not only for the practicing accountants but also for the students of accounting, who have to devote considerable time and energy learning and memorizing myriads of dry and uninteresting rules. Financial reporting is a fascinating area of accounting. But in a rule-driven environment it tends to lose much of its luster and intellectual appeal.

The determination of the periodic profit of a continuing entity is a very complex job. It requires a great deal of knowledge and expertise to perform this job in a meaningful and consistent way. The profit of a business entity can be computed accurately and objectively only after the life of the entity is terminated. At the termination of the life of the entity, everything is past. For such an entity there is nothing waiting for the future. The cash-to-cash cycle is fully complete and the outcome is also known with certainty. The profit of the terminated entity, which is its lifetime or full-life profit, is simply the difference between the cash inputs and cash outputs. It represents increments in wealth in the form of cash. It is the additional cash the entity has generated during the period of its existence. Further precision can be brought about in the computation of lifetime profit by making adjustments for changes in the purchasing power of money. But that is a different issue. The accuracy with which lifetime profit is computed cannot be ensured when it comes to the computation of the periodic profit of a continuing entity. The computation of the periodic profit of a continuing entity involves making assessments concerning the expected future outcomes of incomplete transactions and events. It is with respect to making these assessments that problems are encountered. But that does not mean that periodic profit computation should be viewed differently from the computation of lifetime profit. Conceptually, both should have the same orientation. As it happens in the case of lifetime profit, periodic profit should also be viewed in terms of change in wealth. This is what the balance sheet approach actually seeks to accomplish. Under this approach, asset growth is viewed as the essence of profit; there cannot be any profit unless there is an increase in the value of the net assets (ie, assets less liabilities) of the entity. In other words, it is the growth in the value of net assets that gives rise to profit. Under the profit and loss account-oriented system, the scheme of things is just the reverse; it considers net asset changes as the consequence of profit.

In the balance sheet-driven system, profit is the change in net assets of the entity between two points in time, excluding changes due to contributions from and distributions to owners. The system is

based on the notion that stocks can be measured more meaningfully than flows. Stocks are resources that are measured at a particular point in time. Under the balance sheet-oriented system, flows are recognized and measured when the characteristics of specific assets and liabilities are changed. The concept of profit that the balance sheet-oriented system seeks to make operational is the one that comes nearer to the capital maintenance view of profit proposed by economists. According to this view, the profit of a given period is the excess of the end-of-period capital over the amount needed to maintain capital at its beginning-of-the period level. What this tends to imply is that profit cannot begin until capital is maintained intact. Economists are inclined to view profit as a matter of increased well-offness in the form of capital growth. Profit provides a measure of how much better off an entity has become during a period of time. It is the measure of what the entity could distribute during the period and be as well off at the end of the period as it was at the start. If there is no growth of capital, there cannot be any increase in the degree of well-offness. The zero growth situation implies that capital has just been maintained. Negative growth implies that the degree of well-offness has reduced and that the entity has incurred a loss. Thus if an entity is better off by having made a profit, there must be a reflection of this in the increased value of its capital.

The balance sheet-oriented system is designed to achieve conceptual purity in balance sheet presentation. Achieving conceptual purity in balance sheet presentation requires that the items that are put on the balance sheet represent genuine assets and liabilities. Under this system, the balance sheet cannot be cluttered up with meaningless debit and credit balances. Assets are defined in terms of economic resources and liabilities in terms of obligations to transfer economic resources. If an item is incapable of producing economic benefits in the future, it cannot be regarded as an asset. Similarly, if there is no current obligation to convey economic resources or perform services at a future time, no liabilities can come into being. Since assets and liabilities are real-world economic objects, they are easier to deal with than the nebulous objects like revenues and expenses that have no real-world referent. In the balance sheet-oriented system, the key consideration lies in determining how transactions and events affect the assets and liabilities of the entity. Events and phenomena that do not lead to changes in assets and liabilities are outside the purview of accounting. In this system a great deal of emphasis is laid on the specification of events and phenomena that should trigger recognition of assets and

liabilities. An item may satisfy the definition of an asset or a liability but that is not a sufficient condition for its recognition in the financial statements. To qualify for recognition in the accounts, the item must also meet the recognition criteria. The primary criterion for the recognition of an item in the accounts is the reliability of measurement. A previously recognized item of asset or liability may have to be derecognized if it fails to satisfy the recognition tests on a subsequent date.

When an asset or a liability satisfies the recognition criteria, it is included in the accounts at a monetary amount. The determination of the monetary amount involves the selection of a measurement attribute. There are several attributes of assets and liabilities that can be measured. These include historical costs, discounted present values, current replacement costs, and net realizable values. The most widely used measurement basis is historical cost. The principal merit of the historical cost basis of measurement lies in its objectivity. Historical cost-based measures are objectively determinable and they can be easily understood. But they often fail to reflect economic reality. Current values are more relevant even if less reliable than historical costs. But the issue of how the trade-off between objectivity and economic relevance should be managed still remains unresolved. The balance sheet-oriented system does not presuppose any particular basis of measurement. What it seeks to ensure is that the items that are incorporated into the balance sheet are genuine economic resources and obligations. However, most people are inclined to believe that the move towards the asset-liability viewpoint is virtually a shift towards current values. As a matter of fact, if asset growth is considered to be the essence of profit, then current value should be the obvious choice for the measurement and reporting of assets and liabilities. Although several arguments have been advanced for corporate financial accounting and reporting to be based on current value, accounting standard-setting bodies appear to be somewhat confused as to the approach they should adopt towards the resolution of measurement controversy. Currently, they are dealing with the measurement issue on a case-by-case basis. Rules have been formulated in many jurisdictions requiring that certain assets and liabilities appear on the balance sheet at their current market value instead of their original transaction cost. To begin with, the principle of marking-to-market or fair value accounting is being applied to those assets and liabilities that trade actively in the markets, including debt and equity securities. The principle, it is believed, will gradually be extended to other categories of assets and

liabilities.

Many are inclined to believe that if financial statements are prepared based on the current value principle, then that will bring the market value of the entity close to its book value. But that may not be the case. The value-based balance sheet may not be a valuation of the entity on a going concern basis. The value of a corporate entity is determined in the marketplace based on the market's perception of the entity's future cash generation ability. In fact, the market capitalization³ of an entity at any point in time is the sum of the entity's expected future cash flows, discounted at rates which are commensurate with investors' alternative investment opportunities. But the values of individual assets and liabilities are determined from a different perspective. Moreover, there are many assets and liabilities that do not appear on the balance sheet because they do not meet the criteria of recognition and measurement. But the market takes these assets and liabilities into consideration in forming its expectations concerning the future cash flows of the entity. It may, however, be possible to reduce the gap between the balance sheet value and market capitalization if assets and liabilities are valued based on current value principle.

The balance sheet of an entity at a particular point in time may be prepared based on an independent inventorying of the entity's assets and liabilities with a complete disregard for the transactions and events that have taken place in the past. This should be possible at least from a theoretical point of view. But the principle of independent inventorying may not work in practice. In fact, the balance sheet approach does not even call for a total disregard for the past transactions and events. The computation of periodic profit in the balance sheet dominated system may very well be based on past transactions and events. But under this approach, the appropriate balance sheet carrying amounts would be determined first and the amounts of the transactions and events would then be adjusted accordingly in order to determine the measures of revenues, expenses and other profit and loss account elements. In this system, costs can be carried forward only if they represent assets. This is just the opposite of what is done in the profit and loss account-driven system. In this system, the transactions and events that are recognized during the period are adjusted first to determine revenues and expenses and then the balance sheet carrying amounts are derived as the balancing figures.

If the balance sheet is moved into a more central position of attention than the profit and loss account, it would lead to a

fundamental change of perspective. Consequently, the whole basis of determination of periodic financial results will change. In the profit and loss account-oriented system of accounting, the balance sheet is the link between successive profit and loss accounts. There will be a reversal of roles between the profit and loss account and the balance sheet if the primacy is shifted from the former to the latter. In the balance sheet driven system, the profit and loss account will be the link between successive balance sheets. What this seems to suggest is that the profit and loss account will have to take care of many items that are currently put on the balance sheet as deferred debits and deferred credits, following the matching principle. The shifting of primacy from the profit and loss account to the balance sheet will also result in many assets and debts being reported on the balance sheet.

THE BALANCE SHEET IN AN HISTORICAL PERSPECTIVE

The modern corporate financial accounting and reporting practice is founded on double-entry bookkeeping, which is a systematic and orderly technique or procedure of recording business transactions. Its origin can be traced back to the medieval city states of Italy. The first book on double-entry bookkeeping was published in Venice in the year 1494 by Luca Pacioli, a Franciscan monk and a university professor of mathematics and theology. The book was basically an exercise in mathematics; it contained only two chapters reflecting on the techniques and methods of accounts keeping based on double-entry bookkeeping. Pacioli did not invent double-entry bookkeeping. In his treatise he simply narrated the accounts keeping procedures of the Venetian merchants of his time. Yet, Pacioli is looked upon as the father of modern accounting (Hatfield, 1924, p-243). Pacioli's treatise played a very important role in codifying and standardizing accounting practice. It also did much to spread the double-entry method to the rest of Europe, and from the rest of Europe to the rest of the world.

Following the publication of Pacioli's book, several other books were published in England, Germany, France, and in the Low Countries, but most of these books were either translations or adaptations of Pacioli. More than five hundred years have passed since the publication of Pacioli's book but it still makes for an interesting reading. Modern double-entry bookkeeping differs in many respects from the ancient double-entry bookkeeping described in Pacioli's book but the essentials have remained almost unchanged.



The major changes that have taken place since Pacioli's time in the practice of recording business transactions relate to procedural details. Certain technical refinements have, of course, been brought about but the fundamental framework has remained unaltered.

Pacioli's treatise did not make any attempt at theorizing about the recording procedures; its primary objective was to provide sufficient rules so as to enable merchants to keep their accounts in an orderly and systematic manner. Under the Pacioli system, account books are opened by entering a full inventory of the merchant's assets and liabilities. At the heart of the system are three accounting documents; the memorandum, the journal, and the ledger. In the memorandum or day book, transactions are to be recorded chronologically with explanations. This initial record of transactions in the memorandum is subsequently to be used as the basis for debit and credit entries in the journal. From the journal, entries are to be posted to the accounts in the ledger. The system ends with a closing process that involves transferring the goods and expense accounts to the profit and loss account and the latter to the capital account. The Pacioli system does not make any provision for the preparation of financial statements. It does, however, provide for the extraction of closing balances as a means of checking the arithmetic accuracy of the underlying records and as a means of transferring balances from one account book to the other. Business operation in Pacioli's time took the form of a short-term terminable venture, the profit of which would be computed at the termination. If the venture was successful it would end up with a larger amount of wealth. The Pacioli system was extended further by some later writers through the introduction of the concept of *balance accounts*. The balance accounts represented a summarising category, the function of which was to bring together the several categories of assets, liabilities, and capital as they remained after expenses and revenues has been transferred through the profit and loss summary to the capital account. The balance accounts statement was not a full-fledged balance sheet but it came very close to being that. It was some kind of a post-closing trial balance. Its main deficiency was that it did not present the balances in an interpretative sequence. The balance accounts were an integral part of the ledger. The practice of preparing the balance sheet outside the ledger developed much later.

Simon Stevin of Bruges made an important contribution to the development of accounting by presenting a system of preparing summarized financial statements outside the ledger (Littleton, 1933).

He described the system in a bookkeeping text brought out by him in 1604. Stevin's approach to the presentation of accounts was based on two-fold classification of accounts by the use of two separate reports; the *estate* report and the *proof* report. The estate report includes things that make an estate on a certain day. The accounts that indicate increase or decrease of capital are excluded from the estate report. The proof report is basically concerned with establishing the correctness of the profit figure first computed by comparing the opening and closing balances for net assets. This report incorporates all the other accounts that are excluded from the estate report. In the Stevin system, a clear distinction is made between the accounts that relate to the enterprise status and those that relate to enterprise performance. Stevin was the first accounting writer to require that the books be closed annually, besides at the merchant's death and when the business is liquidated (Most, 1979, p. 249).

In Stevin's estate report, liabilities are placed on the left and assets on the right. But no explanation is provided as to why it has to be so. Many are inclined to entertain the idea that the British practice of preparing the balance sheet by placing liabilities on the left and assets on the right has its root in Stevin's estate accounting. But Yamey (1977) rejects any such possibility of the arrangements of assets and liabilities in British balance sheets having been influenced by Stevin's estate accounting layout. He presents some alternative explanations as to the origin of the British balance sheet format. Whatever may be the case, the fact remains that Stevin represents a major breakthrough in the development of accounting thought. According to Chatfield (1977), Stevin's innovation helped bridge the gap between medieval and modern accounting.

The distaste for profit computations based on the double-entry bookkeeping system was fast growing. Yamey's empirical evidence tends to suggest that the profit and loss account was increasingly being viewed as a vehicle of weeding out the detailed and unwarranted information in the ledger (Edwards, 1989, p. 64). By the middle of the seventeenth century, the practice of preparing balance sheets outside the ledger had become common in Britain. The British merchants became inclined to regard the balance sheet as the most important financial statement because they thought it to be useful in providing answers to stewardship questions. As time was moving on, accounting writers, especially those in Britain, became interested in exploring the logic underlying accounting procedures and this culminated in the development of some useful theories. The *proprietary theory* happens to be one such theory. The theory places the proprietor

at the centre of attention. Assets are assumed to be owned by the proprietor and liabilities are regarded as the proprietor's obligations. Transactions are recorded and financial statements are prepared from the point of view of the proprietor. This idea gave rise to the balance sheet equation : $\text{Capital} = \text{Assets} - \text{Liabilities}$. Many (eg, Chatfield, 1977, p. 220; Littleton, 1933, p. 26), are inclined to believe that proprietorship is the substance of the double-entry system. According to these people, double-entry bookkeeping becomes merely a set of rules without proprietorship. The proprietary theory is essentially a wealth concept. Under this theory, profit represents an increase in the net wealth of the proprietor. Although the theory has some limitations, it still constitutes the basis of much of current accounting practice.

The period between Pacioli and the nineteenth century has been referred to as accounting's age of stagnation. But this characterization seems not to be an appropriate one. It is true that accounting did not progress much during this period, but the period did witness the development of many key accounting concepts and ideas. It is during this period that the concepts of capital as the difference between assets and liabilities and of net profit as the change of capital between two dates (after adjusting for capital contributions and withdrawals) became well established (Most, 1986, p. 37). According to Hendriksen and Breda (1992, p. 44), "this period began as an age of exploration and ended as an age of revolution".

Things started to change rapidly with the onset of the industrial revolution. By this time the venue had shifted to Britain. The industrial revolution brought many significant changes in the structure of enterprises. Large-scale enterprises were born and with that came the need for making large investments in plant and equipment. To meet the increased demand for capital, it became necessary to involve increasing number of savers. The company form of business came to be recognized as the most convenient form of organization. As companies turned to banks for financing their operations, considerable pressures were placed on them to produce financial reports. Since bankers were basically interested in the financial condition of the business, emphasis was placed on the balance sheet. The need for production of financial reports on a regular basis increased further when companies began to list their securities on the various stock exchanges.

The British government gave statutory recognition to the balance sheet in the Companies Act of 1844⁴. The Act required the directors of a company to provide the shareholders with audited balance sheets

annually. But no model was prescribed or recommended. The financial reporting requirements were formulated "in the belief that the directors were performing as stewards in charge of property belonging to other people and, as such, had a duty to report factually on the status and accomplishments of their stewardships" (Littleton and Zimmerman, 1962, p. 84). The 1862 Companies Act recommended a balance sheet model according to which assets would have to be listed on the right and liabilities and capital on the left. This statutory requirement was reinforced in the Regulation of Railways Act of 1868. In this Act, further requirements were provided as to the partitioning of data. According to these requirements, the upper division of the balance sheet would be required to list share capital and mortgage debt on the left and permanent assets and *balance down* on the right. The lower division would report the balance down, operating profits, and profits available for dividends on the left, and operating assets on the right. These financial reporting requirements were modified further in subsequent amendments to the Companies Act. The balance sheet was supplemented by several other statements and schedules, including a profit and loss account. Currently, the statutory requirements relating to the preparation and presentation of company accounts in the UK are contained in the Companies Acts of 1985 and 1989.

By the end of the nineteenth century a significant change in the British approach to profit computations was taking place. The previous practice of computing profits based on changes in net asset values between two dates was being replaced by the practice of computing profits based on measurement of revenues and expenses. As a result, the balance sheet was being reduced to a statement of residuals. According to Edwards (1989, p.111), the transition was "marked by the widespread adoption of the historical cost convention which, when linked with the idea of going concern, produced asset values on the basis of cost allocations rather than periodic appraisal". The main reason why valuation was being demoted in favour of matching seems to be the desire to introduce greater objectivity into profit computations. Greater objectivity in profit computation was needed because profits were being used as the basis for dividend distributions.

Currently the United States (US) is the leading country in the world in the matter of accounting development. US corporate financial accounting and reporting standards are generally regarded as being the most comprehensive and detailed in the world. The US started with the British model which was brought here in the latter

part of the nineteenth century. But the model was soon adapted to local conditions. Changes were made both in form and content of the balance sheet. Unlike the British company balance sheet which reported liabilities and capital on the left and assets on the right, the US company balance sheet reported assets on the left and liabilities and capital on the right. Another important difference between the US and the British company balance sheet stemmed from the ordering of assets and liabilities. The US company balance sheet placed current assets and current liabilities at the top, while the British balance sheet followed a reverse order. Besides these format-related differences, there were also some ideological differences between the two countries as to the objective of preparation and presentation of the balance sheet. The balance sheet was regarded as the financial statement of prime importance in the US "mainly because of its usefulness in furnishing a clue to a borrower's probable ability to repay short-term loans" (Littleton and Zimmerman, 1966, p. 95). It was the belief that the borrower's ability to repay short-term loans was directly related to the conversion of stocks at a higher price. In Britain, the primacy was given to the balance sheet because it was considered as a report to shareholders of management's stewardship.

In preparing their balance sheets, companies in the US used to account for assets based on appraisals. But no agreed principles were used for this purpose. Different companies used different principles in order to determine the values of the assets to be reported on their balance sheet. This practice continued until the 1930s.

The early 1920s witnessed a sharp recession in commodity prices in the US. Companies suffered heavy losses due to shrinkage in their stock values. Bankers became concerned about the debt paying ability of their client companies and, consequent upon which, the loan renewals were almost stopped. This forced companies to explore other financing sources. As the price recession ended, stock markets became active. Companies then became inclined to procure their needed funds by issuing securities in the market. Since the buyers of securities were more concerned with earning power than with short-term debt paying ability, attention was turned to profit computations. Naturally, the profit and loss account came to be regarded as the financial statement of prime importance. As valuation was replaced by matching, the balance sheet was relegated to a secondary position.

The great stock market crash of 1929 was a severe blow to the US economy. To restore investors' confidence in the stock markets,

several measures were adopted. One of these measures was directed at reforming accounting principles. It was thought that sound accounting principles were needed in order to prevent manipulation of accounting numbers. The accounting profession joined hands with the government in bringing about improvement in corporate financial disclosures. This gave rise to the development of a new accounting model the foundation of which was laid on historical cost. The underlying premise of the model was that the primary function of accounting was to match costs with related revenues rather than to be a process of valuation of assets and liabilities. Consequent upon the acceptance of such a model, the emphasis of US corporate financial reporting got shifted from the balance sheet to the profit and loss account.

SOME EARLY ATTEMPTS AT THEORIZING ABOUT THE BALANCE SHEET

Early accounting writers did not pay much attention to theorizing about accounting functions; their efforts were directed mainly at describing the accounting methods and procedures. Much of what constitutes theorizing about accounting is an achievement of the past seventy years or so. There are, however, some early accounting texts that bear testimony to their authors' commitment to theory. Fabio Besta's⁵ *La Ragioneria* is one of those early accounting texts that have commitment to accounting theory. Besta's famous accounting text, which was published in Italy at the end of the nineteenth century, is regarded by accounting historians as one of the earliest monumental works in accounting theory (Weilenmann, 1979). Besta's theory is founded on the concept of *proprietorship*, which is made up of two categories of elements : positive elements (assets) and negative elements (equities). The difference between the positive and negative elements is capital. According to Besta, assets are goods in exclusive property, goods in property with others, and goods which will be restituted by others. Equities, which include provisions and reserves, are described as future outgoes. Besta uses the same basis for arranging assets and equities. His explanations concerning these accounting entities are also based on an identical philosophy. According to Weilenmann (1979, p. 230), the most interesting aspect of Besta's theory springs from the fact that it interprets the balance sheet as the effect of the activities for the future. At that time it was customary to consider the balance sheet as reflection of past events. The major shortcoming of Besta's theory

relates to the way it treats equities. Besta's equities include not only liabilities but also provisions and certain categories of reserves.

Charles Sprague, an American accounting writer brought out in 1907 a very valuable book titled *The Philosophy of Accounts* (Sprague, 1907). In this book he advanced the idea that accounting could very well be regarded as a branch of mathematical or classificatory science and that the principles of accounting could be developed by a *priori* reasoning. Sprague's theory regards the balance sheet as the primary financial statement, which is "the origin and terminus of every account". The analysis of transactions in the Sprague's system is based on the balance sheet equation : $\text{Assets} = \text{Liabilities} + \text{Proprietorship}$. According to Sprague, the whole purpose of the business struggle is to increase wealth, and the proprietorship account is aimed at providing a basis for measuring the success or failure of the business to increase wealth. Sprague's accounting system requires the maintenance of some tributary accounts for a definite period of time. The wealth accumulations that occur due to the undertaking of business transactions are at first to be recorded in these tributary accounts and the net results of these tributary accounts are then to be transferred to the proprietary account in order to complete the process.

Henry Rand Hatfield was another early American accounting writer who made an important contribution to accounting theory. In his *Modern Accounting*, which was first published in 1909, Hatfield adopted a scientific approach to studying accounting issues. Like Sprague, Hatfield was a staunch supporter of the proprietary theory. But he did not lend full support to the view that the balance sheet was both the origin and goal of accounting. Instead, he considered it as one of the important goals of accounting (Hatfield, 1909, p.3). According to Hatfield, the purposes of the balance sheet are twofold : reflecting the financial status of the concern at a given moment of time and exhibiting accumulated profits. Much of Hatfield's attention was devoted to the classification and valuation aspects of the balance sheet items. Hatfield was possibly the first accounting writer to introduce the *all-inclusive* and the *current operating* concepts of profit.

During the first quarter of the twentieth century, a number of French accounting writers made some serious and thoughtful attempts at theorizing about accounting functions. The most noteworthy among them was J. Dumarchey, whose seminal work on *positive theory* was published in 1914. The primary goal of this accounting writer was to establish a scientific foundation for accounting. Dumarchey's theory is based on the notion of *economic value*. In his opinion, accounting

and positive economics should be closely connected. This realization prompts him to adopt a mathematico-economic process to explain the phenomenon of accounting under its double-entry form. He draws heavily on the classifications used in chemistry, physics and biology in order to arrive at the definition of *account*. In the Dumarchey system the balance sheet is viewed from two standpoints: static and dynamic. Under the static framework, the balance sheet is seen as reflecting the relation which exists at a given point of time between assets, liabilities and net worth. The static framework focuses on the qualitative aspect of the balance sheet. In the dynamic framework, the balance sheet is judged in terms of temporal dimensions. It involves a quantitative study.

Because Dumarchey arrives at his theoretical constructs based on a systematic study, their underlying logic seems invincible. The system contains a lot of constructive elements. According to Filios (1981, p. 269), Dumarchey represents "a very well argued attempt to lay the scientific base on which a sound and robust accounting theory could be constructed". The major drawback of the Dumarchey's system lies in its failure to give due consideration to accounting's natural environment.

The German *static theory* is still another early attempt at theorizing about the balance sheet. The static theory, which is almost similar to the Italian theory discussed earlier, is built on the equation: $\text{Assets} - \text{Equities (Liabilities)} = \text{Capital}$. According to this theory, the balance sheet is to reflect the procurement and utilization of capital. The equities side of the balance sheet is seen as reflecting the procurement of capital and the assets side as the utilization of capital. This approach is very much close to the *static funds statement* approach that many modern accounting writers adopt in the analysis and interpretation of the balance sheet. According to this approach, the balance sheet is viewed as a statement of sources and composition of company capital. The assets side reflects where the company's capital is lodged and liabilities side shows the current status of the capital procured from shareholders, creditors and other sources. Under this approach, net profit is "seen as measuring principally the funds available for dividends and reinvestment obtained through the use of capital in the operations of the company" (Hawkins, 1969, p.35). The major difficulty with this approach is that it cannot explain satisfactorily the position of such items as assets received by way of donations, and warranties and provisions.

Eugen Schmalenbach's⁶ theory of *dynamic accounting* is one of those early German accounting theories that are still studied with

much curiosity and interest. Dynamic accounting offers an interesting perspective for explaining and interpreting the balance sheet. It is designed to switch attention from the static position displayed in the balance sheet to the dynamic position portrayed in the profit and loss account. Schmalenbach's book containing the theory of his dynamic accounting was first published in Germany in 1919. The book has been translated into several languages. Dynamic accounting is a departure from the then prevailing view of giving primacy to the balance sheet. It argues for the primacy of the profit and loss account. To the balance sheet Schmalenbach assigns the task of showing not accomplished *preservices* (assets) and *afterservices* (liabilities). According to Schmalenbach, the function of the balance sheet is a transitory one. It exists in order to provide a place for the items that are waiting for their accomplishment. He is of the opinion that the objectives people normally ascribe to the balance sheet cannot be realized in practice; the balance sheet can depict neither the liquidation value nor the value of the entity as a going concern. He further maintains that it is not possible to achieve conceptual purity simultaneously in both the balance sheet and the profit and loss account if there is to be an effective articulation between the two. According to him, if the balance sheet were to give a realistic snapshot of the entity's assets, liabilities, and net worth at a given point in time, then it would be difficult to measure accurately the performance of the entity resulting from its transactions for the period. In Schmalenbach's view, the dynamic objective of measuring performance from transactions should get top most priority and profit should be measured by matching costs and revenues (Schmalenbach, 1959, ch. 1). In his opinion, the emphasis should be on attaining accuracy of the allocations to the profit and loss account within the historical cost framework. He regards the balance sheet as a mere accrual sheet designed to record the sunk costs not yet allocated to the profit and loss account.

According to Tweedie and Whittington (2000, p. 376), Schmalenbach was revolutionary in his time. In their opinion, the central objective of his dynamic accounting strikes a very modern note. But dynamic accounting has its shortcomings. One of the shortcomings is that it does not provide any clear theoretical basis for allocation of costs. Without such a theoretical basis cost allocation becomes an arbitrary exercise. Another serious shortcoming of dynamic accounting is that it does not offer any clear specifications as to the precise use to which accounting information would be put.

Fritz Schmidt, another early German accounting writer of great repute, brought out in 1921 an important treatise containing what he described as the *organic theory* of accounting. This theory was refined and extended in his subsequent works (eg, Schmidt, 1930 ; 1931). Schmidt's organic theory is concerned with the role of the individual entity as part of the national economy or the national production machine. Its basic premise is that the accounting practices of individual entities should be conducive to an appropriate allocation of resources in the economy. This idea leads Schmidt to formulate his theory of profit computations based on the notion of maintenance of capital in productive capacity terms. According to Schmidt, the maintenance of productive power is not possible if profit is computed based on an original value basis. Schmidt's 1921 treatise is possibly the first major treatise on current cost accounting. Structurally, however, Schmidt's organic theory does not differ much from Schmalenbach's dynamic theory. Schmidt, like Schmalenbach, rejects the pre-eminence of the balance sheet. According to him, the main function of the balance sheet should be to render accounts of unaccomplished events.

Karl Kaefer, a Swiss academic accountant, developed an interesting approach to theorizing about the balance sheet. But his treatise was published at a time when the matching approach had already taken a firm root in Anglo-Saxon accounting. Kaefer's treatise was brought out in 1943. So in that respect it cannot be branded as an early attempt at theorizing about the balance sheet. But even then it is being discussed here because of its novelty. In the scheme of things formulated by Kaefer, the balance sheet does not show the results of the past ; instead, it depicts the effect on the future. The asset side of Kaefer's balance sheet shows future inflows of goods and services for which nothing is to be given in compensation. On the equity side of Kaefer's balance sheet are items that represent future outgoes without return. If compensating effects are connected with future inflows and outgoes then they will not appear on the balance sheet. According to Weilenmann (1979, p. 238), this restriction is important because otherwise it would not be possible to find a limit on the contents of the balance sheet. In the study under consideration, Kaefer's attention is focused mainly on the basic financial statements and their contents; it does not make any endeavour to formulate measurement rules for individual financial statement items. But this does not diminish the importance of the theory.



Not all the ideas developed by the early accounting writers while attempting at theorizing about the balance sheet have stood the test of time, nevertheless they have enriched our knowledge as to the nature and function of accounting.

THE GREAT VALUATION DEBATE OF THE 1960S

The historical cost-based accounting model, which was developed in the early 1930s, came under serious attack in the mid-1940s. This model was developed "as a result of crisis and not as the result of a long well-thought out research" (Flamholtz, 1979, p. 116). As the model was subjected to detailed scrutiny, its inconsistencies were increasingly apparent. In the model little consideration was given to the need for striking an acceptable balance between profit computations and valuation of assets and liabilities. As prices started soaring, questions arose as to the validity of historical cost information. The growing uneasiness with the historical cost-based model led to an enhanced interest in inflation accounting. Consequently, there arose a large volume of literature on accounting valuation. Included among those who made valuable contribution to the accounting valuation literature during this period were Baxter (1949), May (1949), Alexander (1950), and Jones, (1955, 1956). These works paved the way for the great valuation debate of the 1960s.

The decade of the 1960s has been regarded as the most fruitful period in the history of academic accounting research. Carl Nelson describes the decade as the golden age in the history of a *priori* research in accounting (Nelson, 1973, p.4). It is during this period that several major theoretical works in accounting emerged. Much research interest during this period was devoted to an examination of the valuation issues in accounting and considerable debate raged over which alternative valuation approach would be the most appropriate one for financial statement presentation. Although some researchers (eg, Kolter, 1963, and Ijiri, 1967) were still attempting a theoretical justification of historical cost-based valuation, there were others that demonstrated active interest in developing alternative solutions to the problems of accounting valuation. It occurred to some that the usefulness of financial statements would increase substantially if historical values could be adjusted for changes in the purchasing power of money. But many others did not like this approach. They argued in favour of adoption of current values as the basis of preparation of financial statements. Of those who pleaded for current values, some were in favour of current entry values, while

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others supported current exit values. There were still some others who were inclined to believe that discounted present values would provide the right answer.

Price-level or current purchasing power (CPP) accounting found its proponents among those who wanted change but were not prepared to sacrifice the objectivity attribute of the historical cost basis of accounting. Under CPP accounting, historical cost financial statements are adjusted for changes in the purchasing power of money. The basic idea and philosophy of CPP accounting are rooted in the indexation techniques suggested by some early accounting writers (eg, Mahlberg, 1923 and Sweeney, 1936). CPP accounting does not change the transaction basis of historical cost accounting; nor does it change the concepts of assets and expenses that underlie the cost-based accounting system. It simply incorporates general price index numbers into the preparation of financial statements. The adjustment procedure it adopts is almost similar to that used by economists in producing comparative national income figures. CPP accounting may be useful in correcting the mathematical problem associated with the unit of measurement, but it can by no means be regarded as an adequate response to the criticisms of historical cost-based measurements. CPP values may not necessarily be current values.

Edwards and Bell's classic work entitled *The Theory and Measurement of Business Income* has come to be regarded as the most prominent theoretical work of the 1960s on current value accounting. The work represented a major advance in the development of current value accounting (Lewis and Pendril, 2000, p. 477). In this work the authors (Edwards and Bell, 1961) advocated the substitution of current entry-value accounting for historical cost accounting. Although Edwards and Bell were not the first to present arguments favouring the use of current-entry values in the preparation of financial statements, theirs was the first comprehensive system on current entry-value measurements. This approach was also advanced by Sprouse and Moonitz (1962), Mathews (1965), Gynther (1966), and Revsine (1970, 1973), among others. Under the current entry-value accounting system, assets are stated in terms of their current-entry prices, and profits are computed based on matching current costs and revenues. An asset's current entry price is defined as the amount that would be needed if the asset were to be replaced on the accounting date. Most exponents of current entry-value accounting are inclined to believe that current-entry value represents an indirect measure of economic value and that current entry-price profit represents an indirect measure of economic profit. Opponents

of current entry-value accounting have identified a number of weaknesses in the system. One of these relates to arbitrary allocation of costs.

R. J. Chambers' *Accounting, Evaluation and Economic Behavior* (Chamber, 1966) represents another monumental work of the 1960s on current value accounting. Chambers regarded current-exit values as the only proper valuation basis in accounting. The use of exit values was first advocated by McNeal in the 1930s (MacNeal, 1939), but MacNeal's presentation was not as thorough and comprehensive as that of Chambers. One important feature of Chambers' work is that it combines elegance and simplicity. The rationale for exit-value accounting was also explained by some other current value proponents. They included Thomas (1969), and Sterling (1970). In the Chambers' system, the business firm is viewed as an adaptive entity that constantly attempts to adjust to the environment for the sake of survival. In the ultimate analysis, the survival of the firm is determined by the amount of cash it can command. Assets and liabilities under this system are, therefore, stated at their current cash equivalent. Chambers' exit value accounting is essentially a balance sheet-driven system. Its focus is on assets and liabilities. It views profit as a growth in net assets. The principal merit of exit value accounting is that the financial statements that spring from the application of exit value principle are allocation-free financial statements. Chambers' exit value accounting has been criticized on the ground that it is narrow in its perspective. In exit value accounting there is the basic problem of how to determine the selling prices of assets that have no ready market.

The 1960s also witnessed the emergence of a number of theoretical works that advocated the use of discounted present value in financial statement preparation (eg, Corbin, 1962 ; Hansen, 1966; Lemke, 1966 ; and Brief, 1969). The essence of present value accounting, which is based upon the Irving Fisher School of economic valuation, lies in the recognition of time value of money. Under the present value accounting system, assets and liabilities are valued by discounting their related future net cash inflows ; profit is the difference between the present value of assets and liabilities at the end of the period and the present value of assets and liabilities at the beginning of the period. The focus is thus on the balance sheet. The present value approach has come to be regarded as an ideal approach against which alternatives might be evaluated. If future cash flows of individual assets and liabilities could be measured on a reliable basis and if appropriate discount factors could be ascertained then present value

measurements would definitely be the most relevant accounting measurements. But these conditions are difficult to realize in practice. The present value approach is currently being used on a selective basis.

Towards the end of the decade a new approach to valuation was emerging. Some accounting researchers were exploring the possibility of developing a multi-value concept based on the principle of property valuation suggested by J. C. Bonbright, an American economist, in his famous publication brought out in the late 1930s (Bonbright, 1937). W. T. Baxter, a British accounting academician, coined the term *deprival value* to this valuation approach (Baxter, 1967). Deprival value is not any single type of value but a combination of possible current values. According to the concept, the value of an asset is determined in the light of the economic context in which it is held. The upper limit to deprival value is replacement cost. If the asset in question is not worth replacing then deprival value becomes the maximum amount that can be recovered from its use or sale. The deprival value concept now occupies an important place in the accounting valuation literature.

The valuation debate of the 1960s was initially an academic exercise but the professional accounting bodies soon became involved in it. Accounting rules were promulgated in many countries in the early 1970s requiring supplementary disclosure of inflation adjusted data. In the late 1970s and early 1980s there was a significant trend towards current cost legislation. But that was a transient affair. With the slowing down of the inflation rate in the late 1980s, the interest in inflation accounting soon faded away.

The valuation debate has been revived again. But the reason for this revival of interest is not inflation. It is the reincarnation of the balance sheet that seems to be the principal reason why the valuation issues have again come to the fore. This time the response has come mainly from the professional side. Accounting rule-making bodies are now thinking seriously about how to integrate current values into the practice of financial reporting. The current interest in valuation issues is not only confined to the determination of appropriate monetary amounts for financial statement items ; it also addresses the question of their recognition in the accounts. Recognition is a vital issue in accounting. In fact, the issue of when to recognize an item in the accounts is of far greater importance than how the item should be valued. But the researchers of the golden age did not pay much attention to this vital issue. Recognition concerns the determination of when to enter items in the financial statements. In the balance

sheet-driven system, the economic events and phenomena of the entity are recognized in the accounts only when they affect the entity's assets and liabilities. Owing to the balance sheet orientation currently being favoured by the accounting standard-setters, there is a greater urge to promote new approaches to the recognition of economic events and phenomena of entities. Consequently, many hidden assets and debts are beginning to appear on the balance sheet. However, a great deal of work has still to be done to straighten things out.

THE EMERGENCE OF CONCEPTUAL FRAMEWORKS

The emergence of conceptual frameworks is an important event in the history of evolution of corporate financial accounting and reporting. Most of the leading accounting standard-setting bodies⁷ of the world have developed conceptual frameworks with the objective of enhancing the theoretical foundations of their accounting standards. These documents are aimed at setting out the objectives and basic principles of financial statements. Conceptual frameworks are not accounting standards. Nor are they a set of rules to be followed in preparing and presenting financial statements. In principle, conceptual frameworks are a set of theoretical constructs to guide the development of specific accounting standards. They describe some abstract systems of reasoning to be employed in the selection of economic events to be recognized, measured and reported in financial statements. The US Financial Accounting Standards Board (FASB) was the first accounting standard-setting body in the world to embark on a programme of constructing a conceptual framework for corporate financial accounting and reporting. The FASB undertook its conceptual framework project soon after it accepted the standard-setting mantle in the US in the early 1970s. The project work has culminated in the production of a series of concepts statements called *Statements of Financial Accounting Concepts* (SFACs). They reflect the theory underpinning FASB official pronouncements. To date, the FASB has issued seven SFACs, the latest one being SFAC No. 7 : *Using Cash Flow Information and Present Value in Accounting Measurements* (FASB, 2001). The issues the statements address include the objectives of financial reporting, qualitative characteristics of financial information, the elements of financial statements, and recognition and measurement in financial statements. In its conceptual framework, the FASB has adopted assets and liabilities as its building blocks. Although there are several other financial statement elements in the FASB scheme

of things, assets and liabilities take the first place of interest. The FASB defines assets and liabilities independently of the accounting process and then uses these definitions to control the definitions of other financial statement elements. This is a clear reflection of the FASB's intention to give corporate financial reporting a balance sheet orientation.

Following the footsteps of the FASB, several other accounting standard-setting bodies of the world have also produced conceptual framework documents setting out their approaches to financial reporting. They include the Australian Accounting Research Foundation (AARF), the Canadian Institute of Chartered Accountants (CICA), the UK Accounting Standards Board, (ASB), and the International Accounting Standards Committee (IASC). But all these conceptual framework documents are based on the FASB conceptual framework and they all rest on the bedrock of the balance sheet.

The emphasis in the conceptual frameworks on the asset-liability approach has brought about a rediscovery of the balance sheet and the balance sheet theory of accounting. It is true that conceptual frameworks are not any binding documents, but accounting standard-setting bodies are committed to using them as the foundation of their pronouncements. In fact, the dependence of accounting standard-setting bodies on the principles laid down in the conceptual frameworks has increased over time. They are now being guided by their conceptual frameworks in the development of new accounting standards and in their review of existing accounting standards. As a result, important new orientations are taking place in corporate financial reporting. The asset-liability focus is gradually replacing the revenue-expense focus.

THE AIM, SCOPE AND METHODOLOGY OF THE STUDY

The present study is an exercise in corporate financial reporting theory. It is about the rediscovery of the balance sheet. More specifically, the study is about the rediscovery of the balance sheet theory of accounting. Its principal aim is to examine how the rediscovery is taking place and how it is changing the landscape of corporate financial accounting and reporting. The balance sheet theory of accounting is being brought back in the belief that it will lead to the development of a firm basis for the generation of transparent, comparable and high quality financial statements. Although the rediscovery process is still going on, many important new develop-

ments have already taken place in the way in which corporate financial reporting issues are resolved. In the process of rediscovering the balance sheet theory of accounting, several old ways of thinking about accounting issues have been discarded and many new ones have been introduced in their place. An endeavour is made in the study to examine how these new orientations and new approaches are going to change the quality of corporate financial reporting. Corporate financial reporting has lost some of its credibility and we need to improve its quality. It will be our endeavour in the study to see how far the balance sheet model is able to restore confidence in corporate financial reporting through improving its relevance and reliability.

The underlying premise of the study is that for meaningful financial reporting to take place, the preparation and presentation of financial statements must be governed by a coherent and consistent corporate financial reporting theory. By *meaningful financial reporting* is meant the kind of financial reporting that is characterized by the ability to capture the economic reality of the financial transactions and events of the entity. Corporate financial reporting is aimed at serving certain objectives. Since businesses operate in a dynamic environment, these objectives change as the climate of business changes. The most recently articulated objective of corporate financial reporting is to provide users with the means of making economic decisions based on economic reality. To be more specific, this objective can be stated in terms of providing the capital market with information it needs to generate correct prices for corporate securities. It is learnt from the recent advances in finance theory that the capital market prices corporate securities based not on any mechanical reliance on published accounting numbers but on discounting the company's expected after-tax cash flows. Financial reporting can be relevant to the capital market's security price determination process if it can offer reliable indications about the ability of the entity to generate cash inflows and the timing and certainty of their generation. For published financial statements to be useful in providing reliable indications about the future cash-generating ability of the entity, they must reflect the economic substance or reality of the transactions and events of the entity rather than their technical or legal form. The quality of corporate financial reporting is determined to a great extent by the quality of accounting standards that constitute the basis of preparation and presentation of corporate financial statements. High quality accounting standards are needed to ensure high quality financial reporting. To develop high quality accounting standards we need a solid and secure theoretical foundation.

The theory with which corporate financial reporting is concerned is not any grand accounting theory that embraces all aspects of accounting operations. As a matter of fact, no such grand theory has as yet been formulated in accounting. Such a grand theory can be conceived only at a very high level of abstraction. Corporate financial reporting theory refers to the theory that is of immediate relevance to the generation of financial reporting information. The first step in the development of corporate financial reporting theory involves the specification of the objectives of corporate financial reporting. Once these objectives are decided upon, efforts must then be made to specify the type of information that should be generated in order to realize those objectives. The next task is to determine the structure and content of the basic financial statements and to define the elements of those statements. At this stage, attention is also to be focused on the recognition and measurement of the items of financial statements. This is roughly the procedure that the major accounting standard-setting bodies of the world have followed in the development of their conceptual frameworks for corporate financial accounting and reporting. The conceptual frameworks, which are intended to be used as the foundation of accounting pronouncements, are regarded as works of corporate financial reporting theory because they describe the abstract systems to be employed in the generation of financial reporting information. The present study draws heavily on these frameworks.

In developing a coherent and consistent corporate financial reporting theory it is at first necessary to arrive at an agreement as to the profit concept that should provide the foundation of periodic financial reporting. In the conceptual frameworks developed by the major accounting standard-setting bodies of the worlds there seems to be a clear move towards promoting the wealth accretion concept of profit. Under this concept, assets growth is considered to be the essence of profit. This view is explored more fully in a subsequent section.

The study is conducted in the normative-deductive tradition. The logical reasoning process the study adopts for most part of its analysis is generally couched in normative-deductive terms. Efforts are, of course, made, wherever possible, to relate the deductively derived conclusions to real world phenomena. The study draws on numerous books, journal articles, committee reports, and official pronouncements of the authoritative accounting bodies. The sources are referred to in appropriate places. In this study no endeavour is made to present a full structure of the balance sheet theory of

accounting. Instead, its aim is to provide an outline to this theory. A brief description of the organization of the materials presented in the remaining part of study is provided below.

LAYOUT

The study is composed of seven chapters in addition to the introduction. The introductory chapter sets the scene by describing the background from which the study emerges. Chapter Two is concerned with the matching principle which constitutes the central plank of the profit and loss account-oriented system of accounting. The purpose of the chapter is to examine the nature of the matching principle and to see how the principle is used to compute financial results. It also investigates the reasons why the matching principle has failed to provide a coherent and consistent basis for addressing accounting issues. Under the matching principle, accounting attempts to associate revenues (accomplishments) of a period with the costs (efforts) incurred to generate those revenues. The chapter first looks at the nature of revenues and the rules that govern the recognition of revenues in the accounts. It then describes how costs are transformed into expenses, how expenses are classified and how they are finally matched with recognized revenues. The major problem of matching revenues and expenses stems from lack of proper association between revenues and costs. The lack of proper association between revenues and costs makes it necessary to allocate costs based on some arbitrarily decided rules. This weakens the foundation of matching. The allocation-induced controversy is addressed in this chapter.

Chapter Three presents a brief sketch of the basic theoretical issues that have arisen in recent discussions on the primacy of the balance sheet. The balance sheet theory of accounting is keyed to the definitions of assets and liabilities. Its principal aim is to attain conceptual purity in balance sheet presentation. The balance sheet approach does not allow the matching notion to justify deferring the costs that do not represent future economic benefits. In this chapter, consideration is at first given to obtaining an understanding of the notions of profit and capital underlying the balance sheet model. Having done this attention is then focused on the definitions of assets and liabilities. The balance model uses its definitions of assets and liabilities to control the definitions of the remaining financial statement elements. Since this controlling aspect is very important, an endeavour is made in the chapter to examine the mechanisms by

means of which the control is actually instituted. Finally, the chapter provides an analysis of the profit and loss account impact of the asset-liability approach.

Chapter Four addresses issues relating to the recognition and measurement of assets and liabilities. Recognition involves the determination of when an asset or liability becomes an asset or a liability for accounting purposes. It also involves the determination of when an asset or liability ceases to become an asset or liability. In the balance sheet model, the growth of net assets (assets less liabilities) is seen as the essence of profit. Hence it is extremely important to obtain an understanding of the events and phenomena that trigger the recognition of assets and liabilities. The recognition issue is examined critically in this chapter. When an item is recognized in the accounts, it has to be stated at a monetary amount. This is called measurement. Like recognition, measurement also is a very important aspect of the generation of financial reporting information. Assets and liabilities can be measured based on different measurement bases. The chapter offers a detailed analysis of the various measurement bases that are currently available in accounting. It also explains the criteria to be observed in choosing appropriate measurement bases for different categories of assets and liabilities.

Chapter Five renders an account of how the balance sheet model is being used by accounting standard-setters in the resolution of corporate financial accounting and reporting issues. In recent years there has been an increasing tendency for accounting standard-setters to promote the balance sheet as the foundation of their pronouncements. In many of their new accounting standards they have adopted the balance sheet approach. An accounting standard's orientation is judged by the fact of whether it focuses on the recognition and measurement of assets and liabilities or emphasizes the effect of transactions or events on the profit and loss account. Specific examples are provided in the chapter in order to demonstrate how the asset-liability model is displacing the revenue-expense model in importance.

In recent years there has been a wider recognition that intangible assets are a significant driver of company value. Intangible assets are increasingly viewed as the most valuable assets of modern service and high-tech companies. For many companies, knowledge-based intangible assets constitute the principal source of gaining operational efficiency and creating competitive advantage. In many companies intangible assets have become the most strategically important resources for building and sustaining competitive advantage. Most of

the worth of these companies is locked up in assets that cannot be touched, seen, weighed or counted. But the traditional transactions cost-based accounting model fails to recognize most of the intangibles, especially those developed internally, that drive company value. Chapter Six describes in some detail the role intangibles assets play in modern businesses and examines the problems that are associated with their recognition and measurement. It also explores how far the balance sheet model can be effective in solving the intangibles-related problems.

Chapter Seven dwells on a financial reporting problem that is now a great headache for accountants and accounting regulators. This is the problem of off balance sheet financing. In recent years there has been proliferation of financial arrangements that have enabled companies to raise money or gain control over resources without having to increase their apparent indebtedness on the balance sheet. The practice of keeping finance off the balance sheet is referred to in the literature as *off balance sheet financing* or *off balance sheet accounting*. Off balance sheet financing is an aspect of *creative accounting*. Companies are motivated to keep finance off the balance sheet for a variety of reasons. The principal motivation, of course, is to reduce the exposure to debts. In this chapter, an endeavour is made to describe the various financial arrangements companies make with the objective of keeping finance off the balance sheet and to examine the underlying motivations for doing this. The chapter also points to the potential danger of off balance sheet financing. Its ultimate goal is to see how the balance sheet model can be useful in making the invisible debts visible on company balance sheets.

Chapter Eight is the concluding chapter. It contains a description of the key points that emerge from the study and provides an assessment of how far the balance sheet model can be effective in making corporate financial reporting relevant to current financial reporting environment.

CHAPTER TWO

The Matching Principle and Its Shortcomings

The matching principle¹ constitutes the central plank of the profit and loss account-oriented system of accounting. The principle requires costs to be expensed and reported in the same accounting period as the revenues they helped generate. Although the matching principle is concerned basically with providing guidelines as to how costs should be allocated, it virtually affects the entire process of generation of financial statements. Matching, in its basic sense, involves mating of related accounting data. "Accounting presentations strive to associate data on an interpretative basis; that is, those items which are related one to another are presented together, those items which are different from one another are separated" (Mautz, 1970, pp. 1-11). In the context of preparation and presentation of periodic financial statements, these related data are revenues and expenses, which represent two opposite but related streams of resources—incoming resources and outgoing resources. The matching principle is applicable to many aspects of accounting operations but it is usually discussed in the accounting literature in the context of associating revenues and expenses. Revenues and expenses are matched in order to determine the results of business operations. Proponents of the profit and loss account-based system consider periodic matching of revenues and expenses as the focal centre of accounting. In the opinion of Littleton (1953, p. 28), it is the periodic matching of revenues and expenses which constitutes the centre of gravity of enterprise accounting. He holds :

The central purpose of accounting is to make possible the periodic matching of costs (efforts) and revenues (accomplishments). The concept is the nucleus of accounting theory, and a benchmark that affords a fixed point of reference for accounting decisions (p. 30).

Revenues are regarded as the accomplishments of the business entity. They are a financial representation of what the business entity has been able to achieve during the given period. To be more specific, revenues represent the economic resources that the business entity has generated from its operations² during the given period. Expenses, on the other hand, represent the economic resources that have been used up or consumed in the process of

generating revenues. They are a reflection of the entity's efforts or sacrifice. If revenues are considered the positive aspect of entity performance, then expenses should be viewed as its negative side. Revenues and expenses are matched on a periodic basis in order to judge the progress of the entity. Progress occurs when the entity generates more resources than it consumes in course of its operations. The extent or magnitude of progress is measured by the amount of profit, which is a residual resulting from matching revenues and expenses. Profit, therefore, involves a net concept that has no separate qualitative significance. It is to be interpreted and judged in terms of the specific accounting rules that form the basis of its computation.

The idea underlying the principle of matching is very simple. It requires expenses to be reported in the same accounting period as the revenues they helped generate. It has been suggested that revenues and expenses should be recorded such that efforts and accomplishments are properly aligned (Beaver, 1989, p. 3). The idea is readily comprehensible even to non-accounting persons. Anthony (1983, p.159) puts the idea underpinning the principle of matching revenues and expenses thus: "If a given event led to both an increase in revenue and an increase in expense, the amount of income in a period would not be correctly reported if the revenue component were reported in one period and the expense component in another period". The matching process is operated on the presumption that revenues and expenses can be allocated to time periods in accordance with some cause-and-effect relationships. The matching process may be viewed either in terms of matching expenses against revenues or in terms of matching revenues against expenses. If revenues are considered the prime factor, expenses are matched against revenues. But when expenses are treated as the key factor, the opposite is done, that is, revenues are matched against expenses. The normal practice, however, is to hold revenues as the controlling factor. Accordingly, the revenues that are applicable to a period are determined first, and then the expenses that are applicable to those revenues are matched with them in order to determine the net profit or net loss for the period. There are, of course, some special situations where a reverse procedure is followed. In these situations, expenses are determined first, and then the associated revenues are matched with them. The percentage-of-completion method of recognition of revenues in the case of long-term construction contracts may be cited as an example in this context. Assignments of revenues to periods are usually governed

by the *realization* convention, which is rooted in another accounting convention known as *conservatism*. Conservatism also plays a very important role in the recognition of expenses.

Paton and Littleton's classic research monograph titled *An Introduction to Corporate Accounting Standards* (Paton and Littleton, 1940)³ represents the first major attempt to develop a coherent and consistent body of accounting theory based on the concept of matching revenues and expenses. It was they who first introduced the concept of matching *efforts and accomplishments*. The Paton and Littleton monograph holds that the primary purpose of accounting is "the measurement of periodic income by means of a systematic process of matching costs and revenues" (p. 123). According to the monograph, the profit and loss account is the most significant financial statement and the balance sheet is subordinate to it. In the model suggested by Paton and Littleton, assets and liabilities play only a secondary role; they are developed as derivative concepts. The model is constructed based on a set of assumptions that underscore verifiability and objectivity. Much emphasis is, therefore, laid on the historical cost basis of measurement. The monograph states that it would be perfectly all right to record historical costs, add them, allocate them, match them with revenues and list unmatched costs on the balance sheet without having to be concerned about their current values. Paton and Littleton's accounting model was enthusiastically received by all sections of the accounting community and within a very short period after its enunciation matching established itself as the most pervasive principle of accounting. As to the widespread acceptance and popularity of the matching principle, Hylton wrote in 1965 :

In fact, it seems that most innovations in accounting in recent years have been justified essentially as better performing (the) matching process. In the minds of many accountants, this single convention outweighs all others; in other words, if a given procedure can be asserted to conform to the matching concept, nothing else need be said: the matter is settled and the procedure is justified (Hylton, 1965, p. 824).

Although matching is no longer regarded as a fundamental principle of accounting, it still dominates much of current accounting practice. Most of the accounting rules and procedures that are currently being followed in the preparation and presentation of financial statements and in the generation of other financial reporting information are underpinned by the notion of periodic matching of revenues and expenses.

Expenses are defined as expired costs. Theoretically, a cost ceases to be a cost and becomes an expense when the economic benefits from having incurred it have expired. Business entities incur a variety of costs in the course of conducting their operations. The incurring of costs entails a financial sacrifice. All costs are incurred in the hope of getting some economic benefits in return. For purposes of computation of periodic results, costs are divided into two categories: expired costs and unexpired costs. Expired costs are costs that are of no benefit to the future. These costs are deducted from the revenues they helped generate. Unexpired costs are treated as assets and are carried to the balance sheet. According to Paton and Littleton (1940, p. 25), these assets are in fact *revenue charges in suspense* awaiting some future matching with revenues as costs or expenses. Costs may expire without making any contribution to revenues. The costs that expire this way are treated as losses and they also become part of periodic profit computation. The charging of expired costs against revenues has the effect of recovering the resources consumed in the process of generation of new resources. Cost recovery is necessary in order to maintain the capital of the entity intact. There are costs that contribute to production of revenues of several periods. These costs should be allocated to those periods. The allocation of costs to different periods involves estimates and judgements. In fact, most of the accounting problems of matching revenues and expenses emanate from the necessity of having to allocate costs to periods. When costs are deferred, the underlying presumption is that they will contribute to future revenues. This implies that future revenues have to be forecasted before any decision may be taken as to the deferral of costs. If a cost has no potential to contribute to future revenues, it should not be deferred.

THE ACCRUALS CONVENTION

The *accruals convention* is one of the central pillars of the matching principle. It constitutes the principal device accountants use to isolate the transactions and events of a given reporting period from those of the next periods. Without this device it is not possible to achieve a proper matching between revenues and expenses. To many accounting writers, matching and accruals are synonymous. The accruals convention requires the recognition of changes in entity resources and obligations as they occur, not simply when cash is received or paid. Reporting cash receipts and cash disbursements does not properly match revenues and expenses. The date on which

a payment is made or received is not relevant in the context of deciding whether costs have been incurred or revenues have been generated. Under the accruals approach, transactions are accounted for even though their physical dimensions may not have yet transpired. Accrual accounting makes a distinction between the recognition of costs and benefits associated with economic activities and the actual disbursements and receipts of cash. Under the accruals convention, accrued revenues are defined as the revenues that have been earned but not yet collected in cash. Examples include credit sales not yet paid for by customers. Accrued revenues are shown as a debit balance (asset) in the current year's balance sheet.

According to the accruals convention, accrued expenses are defined as the expenses that have been incurred but not paid in cash. Accrued expenses are shown as a credit balance (liability) in the current year's balance sheet. The accruals convention seeks to ensure that "the revenues and expenses being matched properly reflect increases and decreases in the pertinent asset and liability account" (Meyer, 1980, p.49). Accrual accounting operates on the assumption that the entity will continue for the foreseeable future. This is the *going concern* assumption. It is a fundamental accounting assumption because, without this, the accruals convention becomes inapplicable. If there is any doubt as to the going concern status of an entity, the whole basis of periodic financial reporting will change.

The alternative to accrual accounting is *cash accounting*. Cash accounting seeks to compute periodic profit by relating together cash receipts and cash payments. Under this basis of accounting, the effects of transactions and other events on the assets and liabilities of an entity are recognized and reported when cash is received or paid. The basic difference between the two approaches, therefore, lies in the timing of recognition of revenues and expenses. Cash accounting is unable to deliver satisfactory measures of periodic financial performance of the reporting entity especially when the reporting period is very short. This is so because cash accounting is unable to capture the full economic consequences of the transactions and events that take place in the business. Accrual accounting seeks to overcome the shortcomings of cash accounting. The accruals process, which is designed to incorporate certain past and expected future cash flows into current profits, provides a more useful and timely measure of entity financial performance. This is so particularly when the reporting period is not a very long one.

There is another basis of accounting called *modified cash accounting*. Under this system of accounting, revenues are recorded on a cash basis, while expenses are recorded on an accrual basis. This accounting basis has limited applications. Professionals such as doctors and lawyers sometimes find it convenient to prepare their accounts based on the modified cash-basis accounting. The basis is also adopted by some not-for-profit entities.

Accounting accruals are of two categories: short-term accruals and long-term accruals. Short-term accounting accruals refer to those accruals that adjust the operating cash flows that occur one year before or one year after the events are recognized and recorded (Guay and Sidhu, 2001, p.110). Short-term accruals, which are related mostly to working capital items, usually reverse within one accounting period. Long-term accruals, on the other hand, are concerned with the matching problems that are of much longer duration. Examples of long-term accruals include depreciation, amortization, and deferred taxation. The effects of accruals are generally recognized in the accounts by means of year-end adjustments.

CONSERVATISM AND MATCHING

The concept of *conservatism*, which is also sometimes referred to in the literature as the concept of *prudence*, is the most pervasive concept in accounting. Sterling (1967) describes conservatism as the fundamental principle of valuation in conventional accounting. Conservatism is also regarded as one of the key driving forces in the process of matching of revenues and expenses. The concept of conservatism requires the introduction of a cautious approach into the recognition and measurement of revenues and assets in the context of preparation and presentation of financial statements. Put simply, conservatism is the practice of using, in case of doubt, the least optimistic estimate when several estimates of amounts are about equally likely. It is defined as the attempt to select the accounting principles and procedures that result in slower revenue recognition and faster expense recognition. Slower revenue recognition leads to lower asset recognition and faster expense recognition leads to higher liability valuation.

Accounting conservatism often takes the form of an adage: "anticipate no profit, but provide for all possible losses". Truly speaking, conservatism is not any basic ingredient in profit concepts. Instead, it is an expression of a general attitude that is applied to

the determination of periodic results of a continuing entity. According to Pattilo (1965, p. 65), conservatism is an attitude existing as a reaction to the uncertainty of the future. If there were no uncertainty, it would not be necessary to be conservative. Since business and economic activities are surrounded by uncertainty, it becomes necessary to adopt a cautious approach in the matter of measurement and reporting of accounting values. Though conservatism is basically a convention⁴, in many cases it tends to override established accounting principles. If there is a clash between conservatism and an accepted accounting principle, it prevails over that principle. For example, the cost principle is violated when accountants adopt the lower-of-cost-or-market rule in making downward adjustments to inventory values. According to Hendriksen and Breda (1992, p. 148), conservatism requires accountants to "report the lowest of several possible values for assets and revenues and the highest possible values for liabilities and expenses". In the face of uncertainties, accountants prefer to err on the side of understatement of revenues and gains and overstatement of expenses or losses. According to APB Statement No. 4 (AICPA, 1971, paragraph 171) :

Frequently, assets and liabilities are measured in a context of significant uncertainties. Historically, managers, investors, and accountants have generally preferred that possible errors in measurement be in the direction of understatement rather than overstatement of net income and net assets. This has led to the convention of conservatism.

Conservatism is an antidote to over optimism of managements. There is a natural tendency for managements to be overly optimistic about the future of their enterprises. This over optimism often is translated into overstatement of profits and asset values. Conservatism seeks to prevent this from occurring. But being conservative does not mean that financial results should be deliberately or intentionally understated. Deliberate or intentional understatement cannot be a virtue. Conservatism should be applied only to those situations and circumstances in which there are real doubts. If conservatism is carried to the extreme, it may lead to the generation of misleading results. When results are consistently understated, that may eventually lead to the destruction of the integrity and reliability of financial statements. It may be self-defeating as well. A reduction in profit in one accounting period that is caused due to the adoption of conservative accounting practices will ultimately affect profit of one or more future accounting periods in a non-conservative manner. In



the opinion of Grady (1965, p. 35) :

Conservatism is not a justification for deliberate understatement. It is rather a quality of judgment to be exercised in evaluating the uncertainties and risks present in a business entity to assure that reasonable provisions are made for potential losses in the realization of recorded assets and in the settlement of actual and contingent liabilities.

Many have suggested that the very practice of using the historical cost basis of measurement is a reflection of application of the doctrine of conservatism. It is due to the operation of this doctrine that expenses and losses are recognized in the accounts even when the evidence is not that strong. But when it comes to recognizing revenues, strong objective evidence is always insisted upon. There are many areas of expense and revenue accounting that bear witness to the application of the doctrine of conservatism. Examples include full expensing of R&D costs when incurred, provisioning for bad debt losses, full expensing of oil exploration costs at the time they are incurred, accounting pension plan costs fully rather than partly, recognizing anticipated losses not gains of long-term construction contracts under the percentage-of-completion method of accounting, and the mandatory amortization of certain capitalized intangible assets.

RECOGNITION OF REVENUES

The matching process normally begins with the recording of revenues. Business entities earn revenues from a variety of sources. Manufacturing and merchandising entities earn revenues from sales of their products to distributors and to consumers. Leasing companies earn revenues from lease rentals. Banking companies generate revenues from interests from loans and advances made to customers. Firms of professionals earn revenues from fees for professional services rendered. Publishers of magazines earn revenues from subscriptions. Companies that allow others to use valuable names and production processes earn revenues from royalties. These are just a few examples as to the sources of revenues. Many other examples can be provided. Even a single entity may have different sources of revenues. Because revenues are derived from different sources, difficulties are often encountered in formulating a common rule for their recognition in the accounts.

There are entities that earn some revenues from subsidiary or sideline activities. For example, a manufacturing entity may earn

revenues by way of interests and dividends. Practices vary as to the treatment of these subsidiary revenues. In some cases subsidiary revenues are merged with mainstream revenues, while in other cases such revenues are reported under separate headings. Revenues are often distinguished from gains. If an entity makes a profit from incidental sales of fixed assets or retirements of debts, this is treated as a gain. Since gains do not have any predictive significance, it is customary to report them separately in the profit and loss account. Unlike revenues, which are reported gross, gains are mostly reported net.

Revenue recognition is normally guided by the *realization* convention⁵. In its basic sense, realization means to turn something into cash or its equivalent. According to Paton and Littleton (1940, p. 49) :

Revenue is realized, according to the dominant view, when it is evidenced by cash receipts or receivables, or other new liquid assets. Implicit here are two tests: (1) conversion through legal sale; (2) validation through the acquisition of liquid assets.

Although revenue realization and revenue recognition occur contemporaneously, the two are distinctly different phenomena. Revenue recognition is the process of recording revenues in the accounts, but revenue realization means that revenue in question has actually been earned.

The most stringent test of realization of revenues is, of course, conversion into cash. Under this test, revenues are realized when goods or services are exchanged for cash. Other tests include conversion into liquid assets such as debtors, the presence of market transactions in assets, provision of services, and appreciation in assets. The 1964 AAA Committee on Realization (AAA, 1965, p. 318) recommended that the concept of realization could be improved if the following criteria were applied: (1) revenues must be capable of measurement, (2) the measurement must be verified by an external market transaction, and (3) the crucial event must have occurred. Of these three criteria, the last one seems to be the most significant one. According to this criterion, revenue realization in a typical business takes place when the most crucial task in the revenue earning process is completed. Revenue earning in a business occurs in phases. These include: (1) occurrence of the production process, (2) completion of the production phase, (3) delivering of goods to customers, and (4) collection of sale proceeds from customers. In most cases, the point of sale is regarded as the most critical point in the revenue earning process. It is the point at which the earning process is virtually complete

because an exchange has taken place. If the ultimate collectivity of sale proceeds is in doubt, revenue recognition is delayed until cash is collected.

If there is a high degree of certainty associated with realization, revenues may be recognized prior to the point of sale. There are many business entities that recognize revenues as soon as the production process is complete. This is possible when the products being produced can be sold in an organized market at predetermined prices. Gold miners used to follow this method in the past when all the gold mined was required to be sold to the government at a fixed price. The practice is currently followed by entities that produce products under firm purchase commitments. There are some contractual services that function by the passage of time. Revenues from these services are recognized on a service production basis. The recognition of interest revenues also takes place on this basis.

Revenue recognition becomes a troublesome issue when products or services are provided over a period of time which extends over several accounting periods. Generally, two types of uncertainty are involved when goods and services have to be provided over multiple periods. The first type of uncertainty relates to the fact that customers may be dissatisfied with future product or service quality and, because of this, they may demand additional benefits. The second type of uncertainty arises from the fact that the cost of providing future product or service may exceed that anticipated. The most conservative approach to solving the revenue recognition problem in such a situation would be to defer revenues until the full product or service has been completed and all major uncertainties have been resolved. But this practice has the possibility of distorting periodic financial results. The other approach would be to recognize revenues as the product is being manufactured or the service is being rendered. Companies engaged in long-term construction contracts have to face this kind of revenue recognition problem. The recent tendency is to follow the percentage-of-completion rule in recognizing revenues for long-term construction contracts if dependable estimates concerning the cost to complete the contract and the extent of progress towards completion can be developed.

In some businesses customers pay in advance of receiving the product or service. When payment is received in advance, no uncertainty exists as to revenue collectivity. But even then revenue recognition may appear to be a highly problematic issue. According to the practice currently being followed, revenue recognition is

delayed in such a situation until the good or service is provided. However, if it is possible to make reasonable forecasts of the costs of delivering the product or service, revenues may be recognized. It is now a common practice among companies to sell consumer durables under warranty. If extreme conservatism is followed, revenue recognition is to be deferred until the end of the warranty period. But it seems unreasonable. The most reasonable alternative would be to recognize revenue at the time of sale of the product and to expense the expected cost of servicing the product at the same time revenue is recognized.

Revenue recognition often appears to be a challenging job when firms provide open-ended offers to refund goods from dissatisfied customers. Firms that provide offers of this kind are themselves certain about their product quality. Nevertheless, providing open-ended offers for refund entails some amount of risk. If revenue is to be recognized at the time of sale, a provision has definitely to be made for costs of possible returns. This is an area where management judgement is involved. If future returns cannot be estimated on a reasonable basis, revenue recognition should be deferred until the return privilege has effectively expired.

The timing of revenue recognition is an important consideration in the computation of periodic profit. It determines the accounting period in which revenue should be reported on the financial statements. The reporting of revenue on the financial statements requires the determination of a monetary amount. This is the measurement aspect of revenue. The criteria that are used to recognize revenue often contain specifications as to how the monetary amount of revenue should be determined. Generally speaking, revenues should be reported on the financial statements at an amount that is highly likely to be realized.

HOW THE MATCHING PROCESS OPERATES

It has been stated earlier that revenues and expenses are generally matched on the assumption that revenues constitute the controlling factor. Accordingly, consideration is first given to the recognition and measurement of revenues. Having determined the revenues to be reported during a given period, the next step is to determine the resources that have been used up in earning those revenues. The key principle to be followed in performing the matching operation is that all expenses incurred to generate a given level of revenue are charged against those revenues in the same

accounting period in which the revenue is reported on the financial statements. Achieving a proper matching between revenues and expenses is indeed a very complex task. It requires more than careful procedure and accurate compilation. According to Paton and Littleton (1940, p. 70), the problem of properly matching revenues and expenses "is primarily one of finding satisfactory bases of association — clues to relationships which unite revenue deductions and revenue" (p. 71). The 1964 AAA committee report on the matching concept maintains that expenses should be related with revenues in such a way "as to disclose most vividly the relationships between efforts and accomplishments" (AAA, 1965, p. 368). The report advocates that "costs (defined as product and service factors given up) should be related to revenues realized within a specific period on the basis of some discernible positive correlation of such costs with the recognized revenues" (p. 369). But the problem with matching is that it becomes difficult in many cases to identify satisfactory bases of association between revenues and costs. Endeavour has been made from some quarters to overcome the problem of matching by dividing costs into two basic groups: product costs and period costs. Product costs are those costs that can be directly associated with products produced or services rendered. Period costs, on the other hand, are costs that are more closely related to a period of time than to products or services. When costs are directly identifiable with specific products or services, they are expensed in the same accounting period in which the related product or service revenue is recognized. Period costs are expensed on the basis of period of benefit.

The AAA committee report referred to above offers a more useful perspective for judging the behaviours of costs in the context of determination of how they should be related to period revenue. According to the committee report, the costs are judged to fall into three categories: direct costs, indirect costs, and losses (AAA, 1965, pp. 369-370). Direct costs are those costs that can be directly associated with specific results. Examples of direct costs include direct material costs, direct labour costs and some other direct production costs. "Insofar as these costs are concerned, the flow of goods and services from the entity to customers is an appropriate justification for allocating them against the realized revenue when the point of sale is judged to be the instant at which income is recognized" (p. 369). Direct costs applicable to unsold goods and services are deferred as part of inventory. These costs are matched against the revenues realized at the time the inventory is given up.

Indirect costs are those costs that are associated with a group of results rather than specific revenue recognition. These are a kind of joint costs for which there is little identifiable causal relationship with any specific segments of revenue. Certain production overhead costs and many administrative costs fall into this category. If it is found that these costs do not have any apparent ability to produce future revenues, they should be matched with the revenues of the current period. This is an area where estimates and judgements are important.

Costs that fall into the third category are designated as losses. They "are product and service factors which lose their ability to produce future revenues within a period, without being either directly or indirectly associated with the production of revenues during that period" (p. 370). Losses are charged against the period revenues as soon as product or service factors lose their ability to produce future benefits. Losses have to be accounted for even if no revenues are recognized in the current period. This gives rise to an anomaly.

The US APB Statement No. 4 (AICPA, 1973) identifies three pervasive expense recognition principles. These principles specify the bases for recognizing the expenses that are deducted from revenues to determine the net income or loss of a period. The principles are *associating cause and effect*, *systematic and rational allocation*, and *immediate recognition* (paragraph 156). It is usually believed that the ideal way of matching revenues with expenses is associating cause with effect. Although direct cause-and-effect relationship can seldom be conclusively demonstrated, many costs appear to be related to particular revenues. The expensing of such costs accompanies recognition of the revenues. Examples of costs falling into this category include sales commissions and costs of goods sold or services rendered. It is necessary to make several assumptions as to relationships for accumulating the costs of products sold or services rendered. Costs may have to be allocated and reallocated in order to make them attachable to products or services. Some assumptions concerning cost flows (eg, LIFO, FIFO, weighted average) have also to be made in order to determine which costs relate to products sold and which remain in inventory as assets (paragraph 158).

There are certain costs in respect of which it is difficult to identify a direct means of associating cause-and-effect. Some of such costs can be associated with specific accounting periods as expenses based on the principle of systematic and rational allocation. Costs of plant and equipment and other depreciable and amortizable assets

are allocated in this manner among the periods in which benefits are consumed. If neither cause-and-effect associations nor systematic and rational allocations can be made, costs are then to be recognized as expenses in the period incurred or in which a loss is discerned (paragraph 161). Application of this principle results in expensing many costs in the periods in which they are incurred. Examples of costs which are expensed in the period in which they are incurred include administrative salaries, advertising and most other selling costs, and costs of resources used in unsuccessful efforts. According to this third principle, items carried as assets in prior periods have to be expensed in the current period if it is discovered that they have no discernible future benefits.

The most problematic aspect of expense recognition relates to the expensing of those costs that provide benefits over multiple accounting periods. Business entities often are required to acquire many resources that provide benefits over a long period of time. Considerable management judgement is involved in deciding how the costs that are incurred for these types of resources should be allocated to the different accounting periods expected to be benefited by them. The resources that provide benefits over multiple accounting periods include buildings, machinery, vehicles, goodwill, patents, copyrights, trademarks, and trade names. In allocating the costs of these types of resources to different periods it becomes necessary to arrive at estimates as to their useful service lives and the expected patterns of their future services. But these estimates are not easy to develop. There are situations in which it becomes almost impossible to judge the relationships between costs and benefits at the individual asset level. According to the accepted principle, costs of these types of resources should be allocated to different periods in a systematic and rational manner. But this principle seems to be too abstract to provide any meaningful guidelines as to how *specific allocation* issues should be resolved. Over the years, many specific rules and procedures have been developed to deal with the problems of allocation of costs of resources that render benefits over multiple accounting periods, but the position has not improved much.

Another problematic area in expense recognition is the impairment of unused assets. The concept of conservatism requires that the value impairment of an unused asset should be recognized as a loss at the time the impairment becomes visible and that the carrying value of the asset should be written down to the market value. But in real practice it becomes difficult to judge whether an asset has impaired. Even if impairment is established, difficulties

may still have to be encountered in determining the amount of impairment loss.

Business entities are at times required to make long-term commitments for resources from which they derive no apparent benefits. An obligation undertaken to repair the environmental damages caused by the entity activity represents an example of this type of commitment. Serious difficulties are often encountered in arriving at a reasonable basis for determining how these commitments are to be dealt with in the accounts. If the matching principle is to be strictly followed, an expense should be recognized as soon as the entity incurs an obligation. This is so because an obligation of this type does not provide any future benefit to the entity. But, because of the uncertainty as to the timing and amount of the obligation, expense recognition becomes a complex job.

Expenses are generally measured in terms of historical costs of the resources consumed in the process of generation of revenues. When historical costs are adjusted downwards due to fall in market value, subsequent expense measurement takes place based on this adjusted value. The matching process does not require any kind of ranking or ordering of expenses. Ranking implies that some items are more important than others. But expenses are all equal in the context of computation of periodic profit. Profit cannot arise until all chargeable expenses are fully covered. Expenses are, of course, ordered and classified in the profit and loss account, but this is done for a different purpose.

THE MATCHING PROCESS AND THE BALANCE SHEET

The matching process rests on the idea that measurement of periodic profit is the primary focus of financial accounting and reporting and that such profit can best be measured by associating inflows and outflows of resources than by measuring changes in stocks. Under this process, the determination of financial status is considered to be a matter of secondary importance. In the profit and loss account-driven system, the balance sheet is the by-product of the matching process. The system focuses on the recognition and measurement of revenues and expenses. These are the elements that come first and other elements, such as assets and liabilities, are secondary. Since profits are measured directly from revenues and expenses, the balance sheet has to stay out of the limelight for most of the time. Anthony (1983, p. 68) describes the process thus :

The focus is on when revenue should be recognized, when expense should be recognized, the amount of revenue to be recognized, and the amount of expense to be recognized. The effect on assets and liabilities then becomes an automatic consequence of the measurement of income.

One of the key issues involved in the computation of periodic profits under the matching process relates to the determination of how the costs that are incurred in a given period should be apportioned between the profit and loss account and the balance sheet. The portions of the costs that are applicable to a given reporting period are reported in that period's profit and loss account and those that are applicable to the future periods are transferred to the balance sheet. Though both the profit and loss account and the balance sheet are regarded as essential documents, in terms of importance, however, the former takes precedence over the latter. Paton and Littleton (1940, p. 67) emphasize the relative importance of the profit and loss account (income statement) as compared with the balance sheet thus :

The income statement reports the assignment to the current period; the balance sheet exhibits the costs incurred which are reasonably applicable to the years to come. The balance sheet thus serves as a means of carrying forward unamortized acquisition price, the not-yet-deducted costs; it stands as a connecting link joining successive income statements into a composite picture of the income stream.

The balance sheet is commonly understood as a statement of assets and liabilities. But the balance sheet that results from the matching process may fall short of being an adequate statement of the assets and liabilities of the entity. The matching-based balance sheet comprises those debit and credit balances that have not passed through the profit and loss account. It is true that many of the debit and credit balances carried forward in the balance sheet under the matching principle do actually represent genuine assets and liabilities, but there may as well be some debit and credit balances that have anomalous character. The essence of this point is captured in the balance sheet definition provided by the AICPA Committee on Terminology in its *Accounting Terminology Bulletin No. 1*. The Bulletin defines the balance sheet as "a tabular statement or summary of balances (debit and credit) carried forward after actual or constructive closing of books of account kept according to principles of accounting" (AICPA, 1953). According to this definition, the balance sheet is nothing more than a statement of some debit

and credit balances. The definition does not even require that the debit and credit balances included in the balance sheet be assets or liabilities. The only requirement that is set forth in the definition is that the balances to be incorporated in the balance sheet should be those that are arrived at after the books of account are closed according to accepted accounting practice. The Bulletin's definitions of assets and liabilities may be worth noting in this context. According to the Bulletin, an asset is "something represented by a debit balance that is or would be properly carried forward upon a closing of books of account according to the rules or principles of accounting" (AICPA, 1953, p. 13). The Bulletin defines a liability as "something represented by a credit balance that is or would be properly carried forward upon a closing of books of account according to the rules or principles of accounting" (p. 14).

Flower (2002, p. 350) describes the nature of balance sheet under the matching principle thus :

Assets

1. Past payments carried forward to be reported as expenses in future periods (eg, plant and equipment)
2. Expected future receipts brought forward and reported as income in the current or past periods (eg, debtors)
3. Past payments that will lead to a receipt in future period (eg, investments)
4. Cash

Liabilities

1. Past receipts carried forward to be reported as income in a future period (eg, subscription received in advance)
2. Expected future payments brought forward and reported as expenses in the current or past periods (eg, outstanding wages)
3. Past receipts that will lead to a payment in future period (eg borrowings)

Equity = Assets – Liabilities

It has been stated earlier that the balance sheet that emerges from the process of matching revenues and expenses tends to assume the character of a sheet of balances. This is the expression

of the balance sheet in its most basic sense. Literally speaking, the most appropriate interpretation of the balance sheet under the matching principle is that of a list of debit and credit balances. According to this approach, the balance sheet is viewed as "a summary of debit and credit account balances that remain after the determinants of income have been decided upon and the retained earnings account has been adjusted for the amount of income that results" (Sprouse, 1971, p. 91). The balance sheet that represents a sheet of balances comes nearer to being a refined trial balance. Under the sheet-of-balances approach, it is not possible to attach any other special significance to the balance sheet.

The users of financial statements have a natural inclination to regard the balance sheet as a statement of financial condition of the entity. This might be so due to the fact that they have no other figures to go on. The following observations by Ross (1966, p. 10) seem pertinent in this connection :

Surely someone should shed a tear for the investor who buys shares in a company because one of the credit balances "carried forward after an actual or constructive closing" of its accounts exceeds the credit balance in that account carried forward after the actual or constructive closing of the previous year. Or for the investor who concludes that a business has changed from a profitable to an unprofitable operation merely because the balance appropriately carried forward in the net income account is a credit one year and a debit the next.

The matching approach provides managers with considerable latitude in deciding which costs should be expensed in the current period and which ones should be deferred. They often use this latitude to smooth periodic profits. In this context it is pointed out by Briloff (1972) that where there is a choice, a steady inclination arises to choose the accounting method which will generate the most favourable picture. Profit earning in most cases does not follow a linear path. But managers are induced to give the impression that periodic profits are actually on the straight line. The underlying belief is that the capital market has a great distaste for profits that follow non-linear path. Profit smoothing⁶ can be done based on a number of techniques. In most cases, however, fluctuations in profits are ironed out through over accruing and under accruing expenses. In some cases profits are also smoothed by advancing or delaying the timing of revenue recognition. Mathew and Perea (1996, pp. 262-63) describe profit smoothing as "the process of deflating the reported profits of a business in good periods and deferring them

to loss making periods in an effort to portray a 'stable' income stream over the years". According to these accounting writers, profit smoothing is possible because of two principal reasons: the flexibility of the matching concept and the lack of an appropriate basis for breaking down the results of an entity into financial periods. Smoothing is responsible for many of the current balance sheet anomalies.

PROBLEMS WITH MATCHING

There are many serious problems with matching. One of the key problems with matching stems from its failure to provide a satisfactory basis for conceptualizing profit. In the absence of there being an explicit and operationally viable concept of profit it becomes often difficult to resolve the basic issue of what should be included in the computation of profit and what should be excluded from it. Many are inclined to believe that matching itself is a concept of profit. But that is not true. It can at best be described as an approach to profit measurement. Matching itself is not any concept of profit. Nor is it possible to develop any satisfactory concept of profit based on the idea of association of specific costs with specific revenues. According to Philips (1963, p.15), matching is "more aptly described as an expedient necessitated by our arbitrary definition of realization than as basis for theory of income". He further argues that "(i)f we did not insist on realization, we would not need to be concerned about matching" (p. 18).

Because matching is an arbitrary process, it cannot provide a satisfactory basis for the development of consistent and coherent definitions of financial statement elements. If the elements of the financial statements are defined based on the matching concept, they inevitably involve a certain kind of circularity. This is so because, under the matching approach, "accounting fundamentals are first derived from accounting practice, and these fundamentals are then used to justify that practice" (Basu, 2001, p. 41).

If a meaningful concept of profit is to be developed, it should be done so by reference to assets and liabilities. Revenues and expenses, which are the key determinants of profit under the matching approach, are difficult to define as accounting elements in their own rights. Assets and liabilities are real but revenues and expenses are nebulous. To be able to define and measure revenues and expenses in a meaningful way, it is at first necessary to define and measure assets and liabilities. In the opinion of Sprouse (1971,

p. 94), "no one has ever successfully managed to formulate a concept of income that is not directly or indirectly dependent upon the concept of assets and concept of liabilities". Since the matching concept is not dependent upon any meaningful concepts of assets and liabilities, the matching-oriented system tends to assume the character of an open system. Under this open system, it is possible to rationalize virtually any accounting procedure. This is the basic conceptual problem with the principle of matching; most of its other conceptual problems emanate from this basic problem. Some specific conceptual problems of matching are discussed below.

The Allocation Problem

The matching concept is often criticized because its application leads to arbitrary allocations. An allocation is basically the partitioning of a set. The matching process involves the allocation of revenues and costs to accounting periods. But allocations, especially cost allocations, often cause many serious problems for accountants. Since it is difficult in most cases to find unique and identifiable cause-and-effect relationship between costs and revenues, allocation issues are in most cases resolved on an arbitrary basis. Allocations, however carefully done, cannot be theoretically justified. Accounting allocations are almost always made based on some methods. Problems arise when more than one method is available for allocating an amount. According to Thomas (1969), the selection of a particular method of allocation over alternative allocation methods is meaningless because the superiority of one method over another can be neither verified nor refuted. His contention is that accounting allocations could be justified if three conditions were fulfilled (Thomas, 1974). First, when the allocated amounts are added together, the resultant sum must be equal to the pre-allocated amount. Second, there should not be any ambiguity as to the method selected for allocating an amount. Third, the allocation method chosen should be defensible, that is, the method chosen can be defended against other possible alternative methods. Thomas argues that most accounting allocations fail to meet these conditions, particularly the third one.

Allocations are normally defended on two grounds: contribution ground and usefulness ground. According to the first argument, costs are allocated in a manner as to reflect the costs of the services received in the given period. The second argument holds that the users of accounting reports are served better by allocated data than

by unallocated data. With regard to the first argument, Thomas maintains that it is not possible for accountants to demonstrate that the services provided by the given input contributed towards a certain output. This is because all the inputs interact with each other to generate an output total that is different from what they would yield separately. So there is no way of knowing individual pattern of input contributions. His further contention is that there is nothing in the external world for allocations to approximate (Thomas, 1974, p. 3). If an allocation does not refer to any partitioning external to the person making the allocation, then any argument given to defend it is useless.

The second argument relates to the usefulness of the allocated data. Proponents of accounting allocations argue that allocated data are capable of serving useful purposes. But this argument is also rejected by Thomas. His contention is that users of accounting information have been conditioned to believe that allocated data are useful. According to him, if accounting data are to serve any meaningful purpose, they should be allocation-free. There are several accounting systems (eg, exit price accounting and cash flow basis of accounting) that are capable of generating allocation-free data.

The Problems with Realization

The realization doctrine seeks to relate the profit determination process to liquidity. Critics of the matching concept view realization as a real barrier to truthful financial reporting because it precludes recognition of wealth increases which are not backed by external transactions. According to Yu (1976, p. 302), the liquidity version of profit determination is very restrictive. His contention is that the "value or economic position of a firm does not await a particular transaction rigidity set at a particular point of time" (p. 302). He also considers the realization doctrine to be a severe restraint of the going concern. Financial reports are prepared on the assumption that the entity will continue operating more or less in its present form for an indefinite period in the future. A continuing or going concern entity maintains a portfolio of current and non-current assets in order to carry out its wealth-generating activity. These assets are utilized in a total manner and they all perform the same function. Both current assets and non-current assets are continuously on the move in the operating cycle. The basic distinction between the two lies in turnover rates; current assets are converted into cash more quickly than non-

current assets. Since asset utilization is indivisible in a going concern entity, the liquidity constraint seems unnecessary.

The realization test does not allow for the fact that profit is earned continuously over time. The price of an asset may rise continually over a number of accounting periods. But if liquidity is insisted upon, a large amount of profit would be reported at the time of sale. Surely, this profit is not solely due to the events of the period in which the sale is made. Mathews and Perera (1996, p.181) say: "If the purpose is to discover the extent to which the financial position of a firm in relation to the rest of the environment has changed from one accounting period to another, dependence on the realisation test is likely to obscure the discovery". The application of the realization test may be justified if value recovery is highly uncertain. But if the test is applied in normal situations, it may result in obscuring the essential facts as to how the entity is generating its wealth.

The Additivity Problem

Financial statement figures are obtained by aggregating quantitative financial measures generated at different levels of operation of the basic accounting process. In fact, additions and similar forms of data compilation are a very common aspect of the entire process of generation of financial statements. The term *additivity* is used in accounting to mean that all the numbers in a financial statement, when added together, should have a sum which has the same meaning as each of the numbers taken on its own (ICAS, 1988, paragraph 6.4). According to Ijiri (1975, p. 57), additivity "is the property of a measure which assures that the quantity of the whole is equal to the sum of the quantities of its parts". The additivity test is applicable to measures which are expressed in quantitative terms. Under the matching process, quantitative financial measures are derived based on historical transaction prices. Financial measures can be meaningfully added, subtracted or related if they are expressed in monetary units of equal dimensions. The dimension of unit of money is its purchasing power. Because the purchasing power of the money unit is not stable or invariant, the transaction price data of different dates cannot be freely aggregated or related. When measures expressed in money units of different purchasing power are added, subtracted or related without making appropriate adjustments, a grave conceptual error is committed. Matching commits this type of conceptual error and both the profit and loss account and the balance sheet are affected by this. According to

Chambers (1989, P. 26), "additions are invalid, pointless and misleading unless the magnitudes added are properly aggregable".

CONCLUDING OBSERVATIONS

The idea of matching efforts and accomplishments is a fine one. But problems arise when efforts are associated with costs and accomplishments with realized revenues. Costs cannot be meaningfully associated with revenues. Profit often "rises or falls without a linked match" (Baxter, 1999, p. 63). In complex situations, it is virtually impossible to determine cause-and-effect relationship between costs and revenues. Moreover, the matching approach places heavy premiums on judgements and estimates. Since the concept of matching costs and revenues is not founded on any consistent and coherent theory, accounting issues in most cases are settled on an ad hoc or arbitrary basis. One important reason why the matching concept has survived for decades, despite its inherent limitations and shortcomings, is that it is very simple to operate. Matching is also the least costly technique of computation of periodic financial results. This seems to be another important reason why matching has survived even after the loss of its relevance. The cost factor is, without doubt, a very important consideration in the selection of an accounting system, but it cannot be the sole factor. Financial statements have ultimately to be useful to users. They have to provide users with information useful for judging the financial condition and performance of the entity. If a system fails to achieve this objective, its use cannot be justified even if it is found to be the least costly system. Admittedly, however, if the cost of operating an accounting system outweighs its benefits, the question of its adoption cannot come into the reckoning. The matching approach may work satisfactorily well when the environment of business is less dynamic and less volatile and when investments made in one period can easily and effectively be related to performance changes in subsequent periods. But the approach tends to become ineffective in an environment in which business enterprises are required to constantly change their financing, investment, and operating patterns and processes in order to cope with the rapid and discontinuous changes in their environment. The matching approach is not geared to capture the kind of complexities business enterprises are currently experiencing in their operations.

Matching is under serious attack. Its legitimacy is being called into question. So far, it has failed to come up with a unified

conceptual notion. In fact, an inherent nature of matching is that it provides no framework for addressing accounting issues. Matching has lost its relevance and much of its past lustre and glamour is now gone. Its sterility is now proved beyond doubt. Accounting standard-setting bodies are trying to move away from it. Already, they have restricted its role in many significant areas of accounting practice. Matching has resulted in the proliferation of accounting rules, but that has not helped cure the problems. Unresolved issues have piled up and financial reporting has been far removed from the reality. But although most people are downgrading matching, there are some who appear to be hopeful about the survival of matching as the main driver in the accounting recognition process. According to these people, matching can be revitalized if certain modifications are made in the way in which it is operated. The suggested modifications include adoption of a more liberal approach to realization, playing down the role of conservatism and restricting the role of allocations. But it seems that no amount of tinkering with matching will rectify its inherent defects. If matching is allowed to exist, it will exist in a very weak form.

CHAPTER THREE

The Balance Sheet Model of Accounting

The balance sheet model of accounting is designed to place primacy on the balance sheet. It emphasizes the definition, recognition, measurement, and reporting of assets and liabilities. The balance sheet model is the antithesis of the profit and loss account model, whose focus is on the elements of the profit and loss account. The basic idea underlying the balance sheet model is that of having a statement of financial position that is defined independently of the profit and loss account. The model looks at the financial events and phenomena of the entity from the perspective of how they affect the balance sheet presentation. Under this model, the elements of the profit and loss account are defined, recognized, measured and reported as a by-product of the measurement of the elements of the balance sheet. According to the balance sheet model, profit is the consequence of measurement of assets and liabilities; it is determined based on how assets and liabilities are recognized and measured. The model is underpinned by economic theory. It seeks to implement, at its very the basic level, principles of economics. The concepts of capital and profit underlying the model are derived from the concepts of capital (a store of wealth or resources) and profit (the increment in wealth from the use of capital) advanced by economists. According to the model's specification, the net profit of a period is the increase in net assets (assets less liabilities) exclusive of new investments and withdrawals. The basic idea underlying the model is that if an entity is better off by having earned a profit, there must be a reflection of this through an enhancement in the value of its net assets. In other words, if an entity is better off at the end of a period than it was at the beginning then it has also increased its net assets. The implication of this is that, to be able to recognize and report profit of a particular amount, an entity must be able to point to either a new asset of equivalent amount or to a liability that has extinguished.

Since assets and liabilities are the fundamental elements in the balance sheet-driven system of accounting, consideration is first to be given to the determination of how they should be defined, recognized, and measured. To begin with, the question that has to

be answered first is : When does an asset (liability) become an asset (liability) for accounting purposes? The next question that is to be raised is: Which events and phenomena should trigger recognition of the asset (liability)? The third important question to be addressed is : How should the asset (or liability) be measured? Anthony (1983, p. 67) places the matter thus:

With the asset/liability approach one must first define assets and liabilities, state when changes in them are to be recognized, and state how the amount of each change is to be measured. Income is then the change in net assets, which is the difference between assets and liabilities.

Under the balance sheet model, profit comes into being when there is a change in the net assets of the entity. But all changes in net assets may not give rise to profit. An entity's net assets may change as a result of transactions with owners. For example, when new shares are issued, it gives rise to an increase in the net assets of the entity. Similarly, if dividends are paid or shares are bought back, the net assets of the entity diminish. The net assets changes that occur due to transactions with owners do not constitute profit. For profits to arise, the net assets changes must arise from non-owner sources. Profit is, therefore, the difference between the net assets of the entity at two points in time, adjusted for transactions with owners. This is essentially an all-inclusive concept of profit. It comprises all recognized changes in the ownership equity of the entity during the period from transactions and other economic events except those resulting from investments by and distributions to owners. For financial reporting purposes, it may be necessary to isolate the operating components of profit from its non-operating components. This is the presentation problem. It is concerned with deciding how to present the different elements of the profit and loss account. The basic principle to be observed should be that of achieving the kind of presentation that provides the most useful information for the users of financial statements.

The balance sheet model is aimed at placing the balance sheet in the centre of the accounting universe. It seeks to ensure that the balance sheet becomes a statement of genuine assets and liabilities and not a mere dumping-ground for the debit and credit balances remaining in the books at the end of the accounting period. Items that are not really assets and liabilities cannot be reported on the balance sheet. In other words, the model does not permit the balance sheet to be used as a means of transferring revenues and costs between accounting periods. Much of this, however, depends on how

assets and liabilities are defined, recognized and measured. Under the balance sheet-oriented system of accounting, ownership equity is the balancing amount the introduction of which is necessary in order to make the balance sheet balance. Truly speaking, the key to the whole thing in the balance sheet-driven system is the definition of assets and liabilities. The definition aspect is explored in detail in later parts of this chapter and the recognition and measurement issues are addressed in a subsequent chapter.

THE OBJECTIVES OF FINANCIAL REPORTING

Corporate financial reporting is not an aimless exercise. It is carried out with the purpose of realizing certain objectives. If meaningful financial reporting is to take place, the objectives must be clearly understood. Different objectives may require different information and different types of financial reporting. Unless the objectives of corporate financial reporting are clearly specified, it becomes difficult to develop useful guidelines for determining the form and content of financial reports. This is why the conceptual frameworks developed by the leading accounting standard-setting bodies of the world have put a great deal of emphasis on the resolution of the objectives issue. Originally, the key objective of financial reporting was to account for the disposition of resources by managers in the interests of the providers of capital. This is the stewardship role of financial reporting. Under stewardship reporting¹, the focus is on demonstrating how faithfully and efficiently managers have performed and how properly they have taken care of investors' funds. But stewardship reporting is now considered to be insufficient to meet the information needs of modern investors. The current approach to corporate financial reporting is that of a decision-usefulness one. According to this approach, the principal objective of financial reporting should be to provide information useful for making economic decisions. The conceptual frameworks accept *usefulness for economic decision-making* as the principal objective of corporate financial reporting. For example, the FASB in its *Concepts Statement No. 1* states: "Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions" (FASB, 1978). According to the IASC *Framework*, the objective of financial statements "is to provide information about the financial position, performance and changes in financial position of the enterprise that is useful to a wide range of users in making

economic decisions" (IASB, 1989, paragraph 12). Although the *Framework* refers to a number of users, it finally comes down to investors and their information needs. In a subsequent paragraph, it states that the provision of financial statements that meet the needs of investors will also meet most of the needs of other users (paragraph 14).

Since the ultimate risk of an enterprise is borne by its investors, they have a legitimate claim to get preferential treatments in financial reporting. Investors are in need of information that will assist them in making informed investment decisions. Investors invest money in corporate securities, especially equity securities, in the expectation of dividends and capital gains. They are, therefore, expected to be interested in the information that will enable them to assess the future distribution potential of the enterprise in order to decide on a market price at which they will be willing to transact shares. Future distribution potential of the enterprise depends mainly on its ability to generate cash flows in the future. As such, if financial reporting is to be useful to investors, it must provide them with information that will enable them to generate reliable estimates concerning the future cash flows of the enterprise and the risks associated with those cash flows.

The objectives of corporate financial reporting would normally be achieved by means of financial reporting that provides information concerning the financial position, financial performance and changes in financial position of the enterprise. The financial position of the enterprise is captured in its balance sheet. The profit and loss account captures the financial performance of the enterprise. Information about changes in the financial position of the enterprise gets reflected in its cash flow statement. These three financial statements constitute the core of financial reporting. They, together with supplementary notes and schedules, provide bulk of the information concerning the financial events and phenomena of the enterprise during the reporting period. Investors and other users of financial statements are expected to use this information in generating expectations concerning the ability of the enterprise to generate cash and the timing and certainty of its generation. They may use other information to supplement the information contained in the financial reports.

All the financial statements referred to above are prepared based on the same underlying financial events and phenomena. But each financial statement looks at those events and phenomena from a different perspective. Together, the financial statements produce

a coherent story of the past financial experiences of the enterprise. The balance sheet provides information about the resources of the enterprise, its financial structure, its liquidity and solvency and its risk profile. The profit and loss account is concerned with providing information as to the return the enterprise has obtained on the resources it has deployed, the components of the return and the nature and characteristics of those components.

The cash flow statement is a recent innovation in corporate financial reporting. It has come in replacement of the funds flow statement. The cash flow statement is aimed at providing information about the ways in which an enterprise procures and utilizes cash. This information provides an additional useful perspective on the financial performance of the enterprise. The information generated by the cash flow statement can be of much use in assessing the quality of reported profits. It can also serve a very useful purpose in evaluating the financial adaptability of the enterprise. An enterprise's financial adaptability is "its ability to take effective action to alter the timing of its cash flows so that it can respond to unexpected needs or opportunities (ASB, 1999, paragraph 1.19). According to the UK *Statement of Principles* (ASB, 1999), the financial adaptability of an enterprise comes from several sources, including the ability to: (a) raise new capital at short notice; (b) repay capital or debt at short notice; (c) obtain cash by selling assets without disrupting continuing operations; and (d) achieve a rapid improvement in the net cash inflows generated from operations.

The cash flow statement is the most objectively prepared allocation-free statement. It is not affected by how resource flows are partitioned between periods. The other two basic financial statements (ie, the balance sheet and the profit and loss account) are affected by the way the enterprise resource flows are allocated to different accounting periods. Decisions as to how resource flows should be partitioned depend on which one of the two financial statements take precedence over the other. According to the conceptual frameworks, the balance sheet should take precedence over the profit and loss account. In the scheme of things conceived by the frameworks, assets and liabilities occupy the central position in the accounting system. Even liabilities may be considered to be secondary, since they represent claims of others that are to be satisfied with assets. In a sense, liabilities are the mirror image of assets. The financial events and phenomena that affect an enterprise do so by changing its assets and liabilities. Changes in assets and

liabilities take place in a way as to keep the balancing aspect of the double entry unimpaired. For example, if a new asset comes into being, it must be accompanied by the recognition of a new liability, a reduction in another asset, an increase in the ownership equity, or some combination of these. One central feature of the conceptual frameworks is that they treat ownership equity as a residual after deducting liabilities from assets. Since the whole system is oriented to the definitions of assets and liabilities, it provides a great source of conceptual integrity. This conceptual integrity is important because, without this, the objective of having theoretically superior accounting standards becomes difficult to achieve.

The Qualitative Characteristics of Financial Reporting Information

The qualitative characteristics of financial reporting information refer to those attributes that make the information provided in financial statements valuable or useful to users. The IASC *Framework* identifies four important characteristics of useful information: understandability, relevance, reliability and comparability. The information provided in financial statements should be understandable to those that have a reasonable level of knowledge of business and economic activities and the way in which accounting functions are carried out. The usefulness of financial reporting information can be increased by making it more understandable. Understandability depends on the way in which the effects of financial events and phenomena are characterized, aggregated and classified. There are some complex matters that may be difficult to present in an easily comprehensible way. But such matters should not be left out of financial statements simply due to their complexity if they contain relevant information.

Relevance is a primary quality that makes financial information useful. According to the IASC *Framework*, information has the quality of relevance when it influences the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations (paragraph 26). Relevance has two important attributes: predictive value and feedback value. Predictive value refers to usefulness of inputs for predictions. The information provided in financial statements is often used by users in predicting future cash flows and future earning power. The higher the predictive value of information, the greater is its relevance.

Feedback value, on the other hand, is concerned with confirming or correcting early expectations of users. The predictive and confirmatory roles of information are interrelated.

Reliability is another primary quality that makes financial information useful. "Information has the quality of reliability when it is free from material error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent" (IASB, 1999, paragraph 31). The IASB *Framework* analyzes several aspects of reliability, the most important of which is representational faithfulness. Information must represent faithfully the events and phenomena it purports to represent. Representational faithfulness is concerned basically with the way in which financial events and phenomena are measured. If there are inherent problems in finding appropriate methods of measurement, representational faithfulness may be difficult to achieve. Where uncertainty of measurement of the financial effects of events and phenomena is very high, enterprises should not recognize those events and phenomena. According to Sterling (1985, p.30), an unfaithful representation of a relevant characteristic would not be useful for decision-making purposes.

The other aspects of reliability are *substance over form*, *neutrality*, *prudence* and *completeness*. The concept of *substance over form* requires that financial events and phenomena should be accounted for in accordance with their economic substance and not merely their legal form. The *neutrality* concept states that information must be free from bias and that financial statements must "tell it like it is". *Prudence* is the inclusion of a degree of caution in the exercise of judgements in the face of uncertainties. Finally, the concept of *completeness* requires that financial information must be complete and that financial statements should include all items whose omission would lead to the accounts being false or misleading. This concept is very close to another concept known as *materiality*. Materiality is one of the cornerstones of corporate financial accounting and reporting. It is a type of filter (Flower, 2002, p.294). It filters out information that is insignificant. Materiality affects the way financial data are aggregated and displayed on financial statements. If an item is not individually material, it should be aggregated with other items.

In many situations there arises a conflict between relevance and reliability. The information that is highly relevant may not be the most

reliable. Similarly, the most reliable information may not be the most relevant information. When a conflict arises between relevance and reliability, it becomes necessary to make a trade-off between these characteristics.

Comparability is an important attribute of useful accounting information. The concept requires that users must be able to compare an enterprise's financial statements through time and with other enterprises' statements at a point of time. According to the UK *SoP* (ASB, 1999, paragraph 3.21), information in an enterprise's financial statements gains greatly in usefulness if it can be compared with similar information about the enterprise for some other period or point in time in order to identify trends in financial performance and financial position. Information about an enterprise is also much more useful if it can be compared with similar information about other enterprises in order to evaluate their relative financial performance and financial position. Comparability is achieved through promoting consistency of accounting treatments.

The qualitative characteristics of financial reporting information will be explored further in the next chapter, which is designed to deal with recognition and measurement issues.

The Concept of *True and Fair* Presentation

Financial statements should be designed in such a way as to present a true and fair view of the financial events and phenomena of the enterprise. In many countries there is a statutory requirement for corporate financial statements to give a true and fair view. The *true and fair view* concept is a British innovation. It was first incorporated in the British Companies Act of 1947² and has survived all subsequent amendments. Currently, the true and fair view requirement has gained worldwide recognition and acceptance. In the US, the equivalent requirement is *presenting fairly*. The EU Fourth Directive on Company Law has adopted the concept. Since the Directive is mandatory, all EU member countries have incorporated the true and fair view requirement in their respective national accounting legislations.

Although the true and fair view concept is widely applied, its status differs from one jurisdiction to another. In many countries, the true and fair view requirement has the authority to override accounting standards and regulations. For example, in the UK, the true and fair view requirement reigns supreme. This is an overriding

requirement. The UK Companies Act has specific provisions to this effect. The IASC has also accepted the principle of fair presentation override. But in the US, the principle of fair presentation cannot override accounting rules and regulations. US companies are required to present financial statements fairly in conformity with generally accepted accounting principles. It is not possible for a US company to depart from a rule of GAAP to achieve fair presentation. A similar requirement exists in Australia.

The difficulty with the issue of truth and fairness is that there is no formal definition of *true and fair view*. According to some, truth and fairness constitutes a single idea, while others have suggested that they are two distinguishable concepts, with the former meaning that financial statements are based on facts and the latter that they are unbiased. In any case, the issue of truth and fairness requires a great deal of professional judgement on the part of those who prepare and audit financial statements.

THE ECONOMIC THEORY UNDERPINNING THE BALANCE SHEET THEORY OF ACCOUNTING

The balance sheet theory of accounting derives much of its conceptual support and strength from economic theory. Under the balance sheet theory, profit is defined as increase in economic benefits during the period in the form of enhancements of net assets. Accordingly, for profit to come about there must be an addition to the net assets of the enterprise. If the net assets of the enterprise at the end of an accounting period exceed those at the beginning, profit has been generated, assuming no additional capital has been introduced or nothing has been withdrawn from the enterprise during the year. The profit of an accounting period represents the surplus wealth that can be distributed to owners while ensuring that capital at the end of the period is at least what it was at the beginning. The concept of profit whose essence lies in the notion of growth in net assets is considered to be the most basic concept of profit. It is rooted in economic theory. Economists are inclined to view profit as a matter of increased well-offness in the form of capital growth. The best-known definition of profit (income) is that by the celebrated Nobel laureate British economist Sir John Hicks. As a matter of fact, the Hicksian definition is the most widely quoted definition of income not only in economics but also in accounting. Although the Hicksian definition is concerned with the income of an individual, it can very well be used as the basis for defining and measuring enterprise

(business) income. The central plank of the Hicksian definition relates to the fact that income cannot come about until the beginning capital is maintained. Hicks' income model begins with an analysis of why the individual is motivated to generate income. He (Hicks, 1946, p. 172) observes:

The purpose of income calculation in practical affairs is to give people an indication of the amount they can consume without impoverishing themselves. Following out this idea, it would seem that we ought to define a man's income as the maximum value which he can consume during a week and still expect to be as well off at the end of the week as he was at the beginning.

The individual is motivated to earn income in order to satisfy consumption requirements. But, in a given period, there may not be parity between income and consumption. If an individual consumes in a period more than what he has earned during that period, he impoverishes himself. On the other hand, if he consumes less than what he has earned, his well-offness or wealth increases. Accordingly, the income of an individual in a given period equals the amount he has consumed during the period plus increase in wealth. Stated simply, income is consumption plus saving. Since a business entity cannot consume anything, the word *consume* is to be replaced by the word *distribute* if the Hicksian income concept is to be adapted to an equivalent concept of business income or profit. Thus, following Hicks' dictum, the income or profit of a business enterprise for a period may be defined as the maximum amount of wealth that it could distribute to its owners during the period while remaining as well off at the end of the period as at the beginning. According to Solomons' adaptation of the Hicksian model, "the income of the business, whether it is incorporated as a separate legal entity or not, is the amount by which its net worth has increased during the period, due allowance being made for any new capital contributed by its owners or for any distributions made by the business to its owners" (Solomons, 1969, p. 109).

A business enterprise is said to have remained as *well off* at the end of a period as it was at the period's beginning if its future prospects do not diminish below those that prevailed at the beginning of the period. In other words, being *as well off* means that the capital of the enterprise has not impaired. Therefore the logical starting point in the process of computation of profit is to define capital. In accounting, capital is usually defined as the excess of assets over liabilities, which is the same as the ownership equity. This accounting concept of capital is consistent and compatible with the economist's

view, which holds that capital is a stock of wealth existing at a point in time. The origin of this view can be traced to the works of another great economist, Irving Fisher. According to Fisher (1906) :

A stock of wealth existing at a given instant of time is called *capital*; a flow of benefits from wealth through a period of time is called *income*.

It may be mentioned here that Fisher's idea is very clear on the meaning of capital, but his idea on the meaning of income seems to be a bit confusing. Fisher interpreted income in terms of consumption, and consumption in terms of personal enjoyment and satisfaction. Thus Fisher's income is some kind of a psychic experience. The difficulty with this concept stems from the fact that psychic experience is not quantifiable. According to Anthony (1983, p. 219), the two ideas can be related if income is recognized as one source of capital. Economists since Fisher have modified the concept by introducing savings as a parameter of income.

If income is to be computed based on the change in capital between two points in time, there must be a mechanism by means of which the value of capital should be ascertained. In Hicks' model, capital is considered to be the present value of expected future receipts. Fisher's model is also based on a similar approach. Business income is the periodic change in discounted value (excluding new investments and dividend payments). Conceptually, the discounted present value is the soundest measure of the value of capital. But it has some implementation difficulties. Since an enterprise's capital is defined as its net assets (ie, assets *less* liabilities), the determination of the value of capital requires the valuation of both assets and liabilities. According to the discounted present value approach, the value of an individual item of asset or liability is the present value of its net future cash flows. The value that is ultimately obtained based on the values of individual items of assets and liabilities may not necessarily be equal to the discounted present value of the future net cash flow streams of the enterprise as a whole. To make the two values equal, a balancing factor (subjective goodwill) is to be introduced. Moreover, valuing individual assets on the basis of expected future cash flows may pose some serious problems when two or more assets are combined to produce a single product or generate a single unit of service. Such assets cannot be valued individually. If any attempt is made to value the assets individually, it will lead to a destruction of conceptual soundness.

The application of the discounting principle requires the prediction of future cash flows and selection of appropriate discount rates. Both of these involve a great deal of subjectivity. Lemke's observation on this point is :

In any case there is universal agreement that the discounted future cash flows of both firm and individual asset values is rarely measurable on an objective basis because of the difficulties involved in predicting cash flows and selecting an appropriate discount rate. Consequently, it is necessary to compromise conceptual soundness in order to devise practicable methods for the measurement of asset values (Lemke, 1966, p.34).

Lemke has made the further observation that, where sufficiently verifiable evidence is available to permit the value of an asset on one or more bases, the basis to be used should be the one that is considered to yield the closest approximation to the discounted present value (Lemke, 1966, p.40). According to Staubus (1967, p.660), the measurement method to be applied to a particular asset should be governed by two criteria: proximity to discounted present value and availability of verifiable evidence. In a perfectly competitive market, there should be a close association between the current market price of an asset and its discounted present value. Accordingly, assets may be valued based on their current market prices. Assets for which no actively traded markets are available should be valued based on some other surrogate measures. Some concession of conceptual soundness may be necessary in order to gain greater objectivity of measurement. The valuation issue will be discussed in detail in the next chapter.

The Concept of Capital Maintenance

In the Hicksian model, profit is linked to the idea of maintaining the capital invested in the enterprise. An enterprise cannot be said to have made a profit during an accounting period if it has not maintained the capital with which it started the period. That is, profit is the excess of the year-end capital over the amount needed to maintain capital at its beginning-of-the year level. According to the model, profit is the return on capital invested in the business. But difficulty arises in determining how the term *capital maintenance* should be defined. If an enterprise has at the end of an accounting period the same amount of capital that it had at the period's beginning, its capital is maintained. If the ending capital is greater

than the beginning capital, the entity is better off. According to Staibus (1975, p. 42), capital maintenance means "having the same amount of capital at the end of a period as at its beginning, so that the entity may 'break even' or have zero income". Shwayder (1969, p. 305) defines the rule of capital maintenance as the rule "which determines how much capital it takes at the end of a period to maintain the capital at the beginning of the period". Periodic profit is affected by both capital valuation and capital maintenance. Capital valuation determines the allocation of profit to different periods; it is basically concerned with the timing of profit recognition. Capital maintenance, on the other hand, is concerned with determining how the wealth recognized to have been generated by the enterprise during a given period should be apportioned between return of capital and return on capital (Basu, 1984, p. 184). This distinction is very important. According to Lee (1974), the concept of capital maintenance is a vital aspect of profit determination "because of the need to incorporate in the income computation a measure of the change in capital during the relevant period". Forker (1980, p. 393) makes the following observations regarding the importance of the concept :

Decisions about capital maintenance concepts provide the logical starting point in any exercise determining business income, in that from different maintenance concepts *ceteris paribus* different measures of income will result, and consequently any meaningful interpretation of income requires knowledge of the benchmark used to determine that income figure.

There are three dominant approaches to capital maintenance: maintenance of nominal capital, maintenance of physical capital, and maintenance of real capital. The concept of capital maintenance emerged as an accounting concept during the early 1900s (Schroeder and Clark, 1995, p. 4). Initially, the idea was to maintain intact the nominal amount of the invested capital. Then there was the idea of maintaining physical productivity capacity. Currently, attention is being focused on the idea of maintenance of real or purchasing power capital. As a matter of fact, the idea of maintaining capital in real terms is an extension of the economic concept of income. The IASC has elevated capital maintenance to the status of a basic concept of financial accounting and reporting by making it a constituent element of its *Framework*. The IASC *Framework* devotes a whole section to address issues relating to maintenance of capital. It explores different approaches to capital maintenance but expresses no preference for any particular approach. A brief

description of each of the dominant capital maintenance approaches is provided below.

Financial Capital Maintenance

The financial capital maintenance concept purports to maintain the monetary value of the net assets of an enterprise. Under this concept, profit is measured only after the money value of the investment is recovered. In other words, it is the monetary investment which is the benchmark for measurement of profit. If the net assets of the enterprise are worth as many monetary units at the end of the period as the enterprise's net assets were worth at the period's beginning, capital is said to have been maintained. Any excess above this amount at the end of the year (assuming no new investments and no distributions) is considered as the profit of year. This is the profit that can be distributed during the year while remaining as well off at the end of the year as at the beginning. The end-of-year financial capital of the entity can be computed based on a number of alternative methods of valuation. However, the issue of capital maintenance is independent of the method actually chosen to value capital. Capital may be valued according to (1) historical cost method, (2) current purchasing power method, (3) replacement cost method, (4) exit price method, or (5) net present value method. These different valuation methods are likely to produce different measures of financial capital and, as such, there can be several measures of profit. In real practice, however, the financial capital maintenance concept is used when historical cost constitutes the dominant method of valuation. The concept is at the heart of the conventional matching-based accounting system.

The financial view is the most dominant view of capital in business. In fact, most people are inclined to view capital in financial terms. The concept is easily understood and it can be implemented fairly easily. Proponents of the financial capital maintenance concept argue that investors are basically interested in the monetary returns on their investments and that they have their own mechanisms by means of which they adjust financial returns for inflation and risks. According to Mitchell (1995, p. 145), the nominal financial capital is a "neutral information set that is normally based on actual experiences of an entity". According to Revsine (1981, p. 385), the income measure that is derived based on the application of the principle of maintenance of nominal capital "is an internally consistent and valid measure of change in well-offness so long as

the starting and ending positions are defined using (nominal) dollars expressed in terms of historical costs that were in effect at the various transaction dates".

But the financial capital maintenance concept has several drawbacks. One serious drawback of the concept is that it ignores the effect of inflation. If there is inflation in the economy, the purchasing power of the monetary unit falls. In an inflationary situation, a given nominal unit of currency buys fewer goods and services in the current period than it did in the previous period. If this vital fact is ignored at the time of computation of profit, it may give rise to a distorted picture of the financial position and performance of the enterprise. The uncritical use of the concept during periods of continuing inflation may eventually lead to the erosion of the real economic power of the enterprise. Another frequently raised criticism of the concept is that it permits inclusion of holding gains in periodic profit. If holding gain is included in periodic profit and if such profit is ultimately distributed in the form of dividends, the ability of the enterprise to maintain its current level of operations may be impaired.

Physical Capital Maintenance

The physical capital maintenance concept focuses on the maintenance of the productive capacity of the enterprise. Under this concept, capital is viewed in terms of physical resources. The stocks of physical resources held by an enterprise at a particular point of time constitute its physical capital. These physical units denote the enterprise's operating capability. An enterprise is said to have maintained its physical capital if it has the same level of physical assets at the end of a period as at the period's beginning. Profit is not recognized until this condition is fulfilled. Bloom and Debessay (1984, p. 94) observe:

The concept of physical capital maintenance views capital as a physical phenomenon in terms of the capacity to produce goods and services. Under this concept, cash is used to acquire assets in order to generate cash flows, and the concern is, therefore, with the firm's ability to replace its physical productive assets.

There are three approaches to the maintenance of physical capital : maintenance of identical physical assets, maintenance of the capacity to produce identical *volume* of goods and services and the maintenance of the capacity to produce the same *value* of goods and services. Under the first approach, capital is maintained when

the entity is in a position to replace its identical physical assets. The notion of holding identical physical assets can be meaningful only under static conditions. It does not carry much sense when technology is changing fairly rapidly. The second approach is designed to accommodate technological improvements. It does not insist on maintaining identical physical assets. Instead, it focuses on the output that could be generated by the beginning assets. Capital is maintained if the entity is able to maintain the same level of output. The third approach seeks to achieve something more than what is called for in the second approach; it takes into account not only the volume of output but also the value of the same. The valuation aspect is taken care of by making provisions for changes in selling prices of the output.

The replacement cost accounting system is underpinned by the notion of physical capital maintenance³. Under this accounting system, the physical assets of the entity are reported on the balance sheet at current replacements costs, and costs of goods sold and fixed asset depreciation or amortization charges are also computed based on current replacement costs. The system treats holding gains (ie, gains from holding assets) as capital maintenance adjustments. As such, these gains are excluded from profit. The physical capital maintenance concept is essentially an entity-oriented concept. It looks at things from the assets side of the balance sheet; the mode of financing is of no concern or interest. Consequently, the profit that is computed based on the idea of maintaining physical capital is regarded as entity profit and not proprietary profit. It is, of course, possible to derive proprietary profit from the entity profit by making adjustments for borrowings.

The concept of maintenance of physical capital is not a well-defined concept. It is characterized by contradictions and ambiguities. According to Chambers (1975, p. 81), there is, in principle, "no case for contending that the particular assets must be replaced or that particular productive capacities must be maintained by particular companies; or even for contending that the ability to replace particular assets be maintained". Sterling (1982, chapter 1) argues that meaningful profit computation under the physical capital concept is possible only if four conditions are met: (1) the enterprise should be fully invested in physical assets; (2) it should continue to replace in identical units; (3) it should face continuously increasing costs; and (4) it should buy and sell in different markets. Since these conditions are not always fulfilled, the status of the concept becomes anomalous. Enterprises are invested not only in physical assets but

also in financial asset. In fact, there are many enterprises⁴ that are invested predominantly in financial assets. The concept becomes inapplicable to such enterprises. The concept is also difficult to apply to those enterprises that are constantly revising or reconstructing their asset and product mixes in order to cope with rapid changes in their environments.

Real (Financial) Capital Maintenance

The real capital maintenance concept is concerned with maintaining the purchasing power of the ownership equity (net assets) at the start of the period plus minus any changes, such as additional investments or distributions, in ownership equity during the period. Profit cannot come about until the purchasing power of these amounts has been maintained. Before the purchasing power adjustments are introduced, it has to be ensured that the assets and liabilities in the opening balance sheet are measured according to current values. Purchasing power adjustments are made based on a price index number that appropriately reflects changes in the purchasing power of money. If inflation factor is zero, no adjustments are necessary. Profit in a zero inflation situation will equal the amount that is obtainable under the financial capital maintenance concept discussed earlier. Many are inclined to believe that the application of the real capital maintenance concept requires that end-of-period assets be restated in terms of purchasing power at the end of the period. But this is not true. As discussed previously, capital maintenance is independent of capital valuation. Purchasing power adjustments, when applied to end-of-period balance sheet amounts, lead to restating the amounts in common units of purchasing power. The restated amounts may or may not represent current values. To ensure that the real capital of the entity has been maintained, it is necessary to compute the current market value of the net assets of the enterprise at the balance sheet date and to compare this value with the restated net assets at the beginning of the period. If no capital has been introduced or withdrawn during the year, then the difference between the two amounts will be the real gain or loss of the enterprise during the period.

The purchasing power concept of capital maintenance can also be used in the context of historical cost method of accounting. But this does not make much of a sense. If this practice were adopted, the beginning historical cost-based net worth would have then to be restated in terms of monetary units of purchasing power at the end

of the period in order to make comparison with the net worth at the balance sheet date, based on historical costs. Such an exercise seems to be meaningless one, though technically it might appear to be feasible. The concept can be used meaningfully if financial statements are prepared according to current value principle, especially exit value principle. In fact, most proponents of exit value accounting consider the maintenance of purchasing power of the proprietary capital to be an essential requirement in the measurement of periodic income.

An entity's capital is usually represented by two types of assets: physical and purchasing power (monetary assets *less* liabilities). According to Cowan (1975, p. 255), capital maintenance should be judged in terms of maintenance of these two types of assets. In his opinion, separate principles should be adopted for maintaining these two types of assets. What he intends to suggest is that the capital that is represented by net monetary resources should be maintained in purchasing power terms and the capital that is represented by physical resources should be maintained in productive capacity terms. This may be a grand idea, but it may not be easy to apply this in practice. The ratio of fixed assets to net monetary assets is not any constant phenomenon; it is subject to continuous and constant changes.

The computation of periodic profits of a continuing enterprise requires the development of a combination of capital maintenance and capital valuation. Since there are several rules of maintenance of capital and several methods of valuation of capital, many combinations of capital maintenance and capital valuation are possible, at least theoretically⁵. But all these combinations may not prove to be equally feasible or useful. Efforts should, therefore, be made to develop a combination of capital valuation and capital maintenance that best serves the purpose of financial reporting. If the physical capital maintenance concept is ruled out because of its impracticality, the choice is then confined to two alternatives: financial capital and purchasing power capital. If inflation is not that significant, financial capital can serve the purpose well. Otherwise, the choice should go in favour of purchasing power capital.

THE OPERATION OF THE BALANCE SHEET MODEL

The balance sheet model, as has been noted earlier, is centred on assets and liabilities. Under this model, accounting functions are carried out based on the premise that an enterprise has a certain

stock of net wealth at the start of a period, which is captured in its balance sheet as of that time. The net wealth of the enterprise is equated with the ownership equity, which is the difference between assets and liabilities. An enterprise's balance sheet at the start of a period can be expressed in equation form : Assets $(A)_0$ - Liabilities $(L)_0$ = Ownership Equity $(Q)_0$. This is the balance sheet equation in its net wealth form. The beginning balance sheet of the enterprise provides the starting point for the operation of its accounting cycle. The financial events and phenomena that take place during the period are recorded in the accounts in terms of their effect on the assets and liabilities of the enterprise. At the end of the period, the enterprise arrives at a new balance sheet with a different set of assets and liabilities and a different stock of net wealth. The closing balance sheet takes the form : $A_1 - L_1 = Q_1$. The accounting cycle of the enterprise is complete with the preparation of the closing balance sheet. If the net wealth of the enterprise has increased during the period, the increased amount is seen as the profit of the period. This excess represents the additional wealth created by the enterprise during the period. The net wealth change that has occurred due to transactions with owners has of, course, to be adjusted first before any endeavour is made to compute profit. The profit and loss account is introduced to provide an analysis of the sources from which profit is derived. The operation of the balance sheet model can best be understood by looking at the process by which periodic profit is determined based on the asset-liability approach. Mathematically, the profit determination process may be expressed in the form of an equation as an under :

$$\pi_{0-1} = Q_1 - Q_0 + D_{0-1} - I_{0-1}$$

Where : π_{0-1} = profit for the period of time t_0 to t_1 ; Q_1 = ownership equity of the enterprise at point of time t_1 ; Q_0 = ownership equity of the enterprise at point of time t_0 ; D_{0-1} distributions during the period $t_0 - t_1$; I_{0-1} = new investments during the period $t_0 - t_1$.

Since ownership equity is defined as net assets (ie, excess of assets over liabilities), the above equation may be rewritten as:

$$\pi_{0-1} = (A_1 - L_1) - (A_0 - L_0) + D_{0-1} - I_{0-1}$$

If it is assumed that distribution and new investments during the period are zero, the equation then reduces to :

$$\begin{aligned}\pi_{0-1} &= (A_1 - L_1) - (A_0 - L_0) \\ &= (A_1 - A_0) - (L_1 - L_0) \\ &= \Delta A_{0-1} - \Delta L_{0-1}\end{aligned}$$

(Δ is a symbol of absolute change)

The above formulation tends to suggest that, for profit (in an algebraic sense) to come about there must be a change in the assets and liabilities of the enterprise. Thus profit is linked with opening and closing net assets. In this scheme of things, the profit and loss account, whose elements (ie, revenues, gains, expenses and losses) are defined as changes in assets and liabilities, is seen as a linking financial statement between the opening and closing balance sheets. The way in which the link is established may be demonstrated symbolically as follows :

As has been noted above, the balance sheet of the enterprise at the start of the period is stated in the form : $A_0 - L_0 = Q_0$. After incorporation of changes in assets and liabilities that take place during the period due to the occurrence of financial events and phenomena, the equation becomes:

$$(A_0 + \Delta A_{0-1}) - (L_0 + \Delta L_{0-1}) = Q_0 + \Delta Q_{0-1}$$

Now ΔQ_{0-1} (change in capital during the period t_0 to t_1) is the combined effect of earning profit (π_{0-1}), introduction of new capital by owners (I_{0-1}) and distributions to owners (D_{0-1}). If the positive and negative components of profit are denoted by R (revenues and gains) and E (expenses and losses) respectively, then π_{0-1} can be substituted for $R_{0-1} - E_{0-1}$. The expression $\pi_{0-1} = R_{0-1} - E_{0-1}$ is the equation of the profit and loss account. The above equation can then be expanded as follows :

$$(A_0 + \Delta A_{0-1}) - (L_0 + \Delta L_{0-1}) = Q_0 + (R_{0-1} - E_{0-1}) + I_{0-1} - D_{0-1}$$

Since $A_0 + \Delta A_{0-1} = A_1$; $L_0 + \Delta L_{0-1} = L_1$ and $Q_0 + \Delta Q_{0-1} = Q_1$, the equation eventually reduces to:

$$A_1 - L_1 = Q_1$$

This is the balance sheet at the end of the period. In the balance sheet-driven system of accounting, the balance sheet and the profit and loss account articulate. But that articulation is effected in way

different from that achieved under the profit and loss account-based system of accounting. When the balance sheet is the dominant financial statement, the interconnection between the two financial statements is established as follows :

Profit and Loss Account for the period.....

	Rs.
Revenues and gains (increases in assets and decreases in liabilities from non-owner sources : $\Delta A + \Delta L$)	xxx
Expenses and losses (decreases in assets and increases in liabilities from non-owner sources: $\Delta A + \Delta L$)	(xxx)
Net profit	xxx

Balance Sheet as at the end of the period

Assets	xxx
Liabilities	(xxx)
Ownership (shareholders') equity	xxx
Composition of ownership equity :	
Contributed capital	xxx
Retained profit at the beginning	xxx
Net profit for the year	xxx
Recognized changes in net assets not reported in the profit and loss account (eg, valuation adjustments)	xxx
Dividends paid during the period	(xxx)
Total ownership equity	xxx

The above scheme does not tell anything about how assets and liabilities should be recognized and measured; nor does it give any indication as to how the beginning net assets should be restated into end-of-period units. The model does, however, serve a very useful purpose by providing a reference frame for conceptualizing on the profit generation process.

According to the model, profit would have to be computed by periodic inventorying of assets and liabilities. Conceptually, this is okay but it has some practical difficulty. For practical purposes, profit

is to be computed based on the data generated by the double-entry bookkeeping process. Exchange transactions constitute the primary basis from which bookkeeping data are generated. But under the balance sheet model, the recognition and measurement of exchange transactions are to be based on principles that are different in many respects from those followed in the conventional matching-based system. Moreover, under the balance sheet model, the transactions-based data may have to be remeasured on the balance sheet date in order to determine the appropriate carrying amounts. The ultimate test to be applied for this purpose is the *asset-liability* test. This is wherein lies the key difference between the balance sheet model and the profit and loss account-based model. Under the balance sheet model, the appropriate balance sheet carrying amounts are determined first: the amounts to be transferred to the profit and loss account are the balancing figures. The matching-based system looks at the issue from a different perspective. It determines first the components of profit: assets and liabilities are the balancing figures.

One key difficulty with the periodic inventorying approach to profit computation is that it tells nothing about the components of profit. It provides only an aggregate measure of the profit that has been generated during the given period. The profit and loss account is prepared to provide detailed information as to the sources from which profit has been generated. The events and phenomena that give rise to profits are classified into certain specific elements. The US FASB in its *SFAC No. 6* (FASB, 1985) defines four profit and loss account (income statement) elements. These are revenues, expenses, gains, and losses. The UK *Statement of Principles* (ASB, 1999) restricts the profit and loss account elements to two: gains and losses. These gains and losses include items that are generally referred to as revenues and expenses. Income includes revenues and gains, and expenses include losses. Although there are some differences among accounting standard-setting bodies as to the way they view the elements of the profit and loss account, they adopt more or less an identical approach in the matter of offering specifications as to how the elements should be integrated into the whole scheme of preparation and presentation of financial statements. The elements, however conceived, are defined in all cases as changes in assets and/or liabilities. This is so because the driving force in profit computation in the balance sheet model is movement in net assets.

The Nature of the Balance Sheet Elements

The balance sheet is to disclose the financial position of an enterprise at a point of time. The elements in terms of which the financial position of the enterprise is disclosed are *assets*, *liabilities* and *ownership equity*. These are called the elements of the balance sheet. Of these three elements, the first two constitute the key elements while the third one is a residual element, which is defined as assets less liabilities. The balance sheet is often presented as a two-sided document, with assets on one side and liabilities and ownership equity on the other. Each element of the balance sheet is sub-divided into certain convenient categories. This is done in order to make the balance sheet information more informative and more useful to users of financial statements. The present section provides a detailed analysis of the nature and characteristics of the balance sheet elements. It begins with assets.

Assets

Under the balance sheet model, assets constitute the central focus of accounting. Broadly speaking, assets are sources of future economic benefits. An enterprise's assets may assume a variety of forms, including, cash, bank balances, debtors, inventory, land, buildings, machinery, investments in other enterprises and intangibles. These are all economic resources in that they are expected to provide future benefits to the enterprise. But to say that an asset is an economic resource is to say very little about it in terms of its nature. *Economic resource* is a very broad term, which can be interpreted in a variety of ways. Some are even induced to believe that *economic resource* is a first notion in the concepts of accounting and as such it cannot be properly defined. It may be mentioned here that in every field of inquiry, there is a first notion in the concepts that goes undefined. According to Gellein (1981, p.2-13), for financial accounting such a first notion is "economic resources, future benefits, potential services, or some variation of those terms". He holds that the first term "can be talked about, but not defined, because no distinguishing term comes before it" (p.2-14). Whether or not *economic resource* is the first notion in the concepts of financial accounting is debatable. There are many discourses in accounting that attempt to explain how the notion should be interpreted in the context of asset accounting. The economic benefits

that are considered to be embodied in an asset are its ability to contribute to future net cash inflows of the enterprise. According to Wolk et al. (1992, p. 300), the cash flows of an asset "may occur in one of two ways: in a direct market exchange for another asset, or through conversion in a manufacturing operation to finished goods (which are then exchanged for another asset in a market exchange)".

Truly speaking, to define something is to set a kind of boundary. It is this boundary which separates that something from other neighbouring things or objects. To be meaningful, the boundary should be clear and unambiguous. There should not be any overlapping zones. Otherwise, the definition may turn out to be an open-ended one. Since the balance sheet model is centred on the definition of assets, it is necessary to craft the definition in such a way as to facilitate the making of a clear distinction between the items that are assets and those that are not. That is, there must be a clear line of demarcation between assets and non-assets. Really speaking, correctly defining assets is one of the keys to the successful implementation of the balance sheet model. Many definitions are now available that focus on the resource-like nature of assets. For example, Staubus (1977, p. 126) defines an asset as "any economic resource that is capable of providing service to the entity". The definition focuses on two characteristics. First, to be an asset, an item must be an economic resource. Second, the economic resource must be capable of providing service to the entity. Staubus also includes measurability in terms of money as a component of his definition. Accordingly, if an economic resource is not measurable in monetary terms, it cannot be regarded as an asset.

There are some accounting writers that consider exchangeability or severability to be an essential characteristic of an asset. According to McNeal (1939, p.90), "(a) good that lacks exchangeability must lack economic value because its purchase or sale must forever remain impossible, and thus no market price for it can ever exist". In the balance sheet-driven accounting model developed by Chambers, a great deal of emphasis is laid on the notion of *severability*. According to Chambers (1966, p.103), an asset is "any severable means in the possession of the entity". In his opinion, severable means is "any means which, at any given time of action, may be converted to other means by exchange or the process of production, or which may be alienated by way of gift" (p.104). Accordingly, if an item of economic resource cannot be severed from the entity and sold, it is not an asset. In terms of this definition, goodwill does not

rank as an asset because it is not severable from the entity. This severability characteristic is similar in many respects to the characteristic of *measurability* proposed by many (eg, Arthur Andersen and Co., 1974; Staubus, 1977). In real practice, many resources are found that have substantial value in use to their owners but for which there are no ready markets. If the exchangeability criterion is to be adhered to strictly, these resources cannot be included in the balance sheet. Exchangeability may be regarded as a desirable characteristic but not an essential one. Exchange is only one of the several ways to obtain the benefits of assets. There are many entity-specific assets (eg, specialized equipment, and specifically constructed factory structures) the benefits of which are not affected by whether they are exchangeable or not.

There exists a great deal of controversy as to how the ownership issue should be dealt with while formulating the definition of an asset. According to many, an entity's assets are those economic resources that are owned by it. By ownership they mean legal ownership. If an entity is not legally entitled to own an item of resource, then that item is not an asset of the entity. According to Lall (1968, p. 244), "assets must necessarily have the protection of law in the sense that the enterprise to which they belong should have a legal claim to their enjoyment". In the definition provided by Parker (1988, p.111), there is an emphasis on the legal ownership rights to future services. Parker defines an asset as "any property tangible or intangible from which future benefits are expected and of which a company has a legal right of use as a result of a past or present transaction". But there are others that do not insist on legal ownership rights. Instead, they focus on the notion of *control*. The fact that control is an essential characteristic of an asset was first pointed out by Ijiri (1967, p. 69), who referred to the fact that "accounting is not concerned with economic resources in general, but only those which are under the control of a given entity". *Control*, in this context, means the ability to obtain the economic benefits and to restrict the access of others. The ability to restrict the access of others is very important. An entity may have an access to the economic benefits being provided by an economic object but that object cannot be regarded as its asset if the entity is unable to regulate the access of others to those benefits. The essence of control lies in the fact that two or more entities cannot include the same asset in their balance sheets at the same time. There are several indicators that are used to judge the existence of control. These include the ability to sell, use, exchange, settle

liabilities or pay dividends with it. The control aspect is underscored in the definition formulated by Solomons (1989, Chapter 3)). According to Solomons, assets are "resources or rights incontestably controlled by an entity at the accounting date that are expected to yield it future benefits".

Control is recognized as an essential characteristic of an asset in the definitions provided in the conceptual frameworks developed by the leading accounting standard-setting bodies of the world. For example :

- Assets are probable future economic benefits obtained or *controlled* by a particular entity as a result of past transactions or events (FASB, 1985, paragraph, 25).
- An asset is a resource *controlled* by the enterprise as a result of past events and from which future benefits are expected to flow to the enterprise (IASB, 1989, paragraph, 49).
- An asset is a service potential or future economic benefit *controlled* by the entity as a result of past transactions or past events (AARF, 1992, paragraph, 12).
- Assets are service potential or future economic benefits *controlled* by the entity as a result of past transactions or past events (NZSA, 1994, paragraph, 7.7).
- Assets are rights or other access to future economic benefits *controlled* by an entity as a result of past transactions or events (ASB, 1999, ch. 4).

(Emphases added)

These definitions are important because they are now being used as the basis for formulating accounting standards. According to these definitions, assets should have three essential characteristics: *future economic benefits*, *control of others' access to such benefits*, and *resulting from past transactions or past events*. The first two characteristics have already been discussed above. The third one requires an explanation. According to this characteristic, the rights to future economic benefits must arise as a result of a past transaction or event. This tends to suggest that there cannot be any recognition of an asset unless there has been an identifiable transaction or event in the past. There is no difficulty with the notion of a *transaction*, but problems may arise in interpreting the term *events*. What is an accounting event? Can the signing of a contract or the undertaking of a plan be regarded as an accounting event? The question is not easy to answer. Some are inclined to believe

that events are those happenings that are partly or entirely beyond the control of management. Examples of these types of events include changes in prices, changes in foreign exchange rates, technological obsolescence, natural calamities, wars, communal riots, expropriations, and imposition of penalty or fines by regulatory authorities. If events are interpreted this way, then wholly executory contracts cannot be recorded as assets. The issue is examined further in a subsequent chapter.

One immediate effect of imposition of the *transactions or events* clause is to exclude all contingent assets from the balance sheet. Transactions or events are judged to be a confirmation of the entity's entitlement to the future economic benefits involved. The notion underlying the inclusion of the clause in the definitions of assets is that control over access to future economic benefits cannot be established until the occurrence of transactions or events. But this may not always be true. An entity may at times have control over access to certain future economic benefits without there being any identifiable transactions or events. But if the requirement of having a past transaction or event is insisted upon, the entity will not be able to recognize any assets in those situations. A certain discovery resulting in substantial economic benefits for the entity may take place all by chance, but no assets can be recognized because there is no transaction or event. However, if the term *event* is broadly defined so as to embrace any kind of phenomenon that changes the economic status of the entity, the discovered resource can be recognized as an asset of the entity.

The definitions referred to above are the latest authoritative definitions. They assert that assets are economic resources. This assertion corresponds to common sense understanding of the term *assets*. Although these recent definitions are regarded as significant improvements over the earlier ones, there is still some amount of ambiguity or haziness around them. They cannot state it categorically as to whether anything on the margin is an asset. To overcome this problem, accounting standard-setters have formulated certain specific criteria to determine how assets should be recognized in the accounts. The recognition issue is discussed in the following chapter.

Liabilities

Under the balance sheet-based system of accounting, liabilities are essentially the opposite of assets. That is, liabilities are negative

assets. Consequently, the definition of a liability should be analogous to that of an asset. If assets are defined as rights to future economic benefits, liabilities should be defined as obligations to give up future economic benefits. Legally speaking, a liability is an obligation of a party to deliver resources or services to another. Accounting liabilities do not always coincide with legal liabilities. Accounting liabilities include various types of obligations, which arise mostly from benefits received in the past. The way in which liabilities are defined is important because it has a bearing on how the liabilities/equity distinction should be made. This distinction is of crucial significance in the context of financial reporting because it affects the reporting of financial position as well as financial performance. Under the matching-based system, liabilities arise in three different ways. First, they arise when goods and services are acquired on credit. Second, liabilities are incurred when money is borrowed from banks, financial institutions, and the public. Finally, liabilities arise when customers make advance payments. But the balance sheet approach views liabilities from a much broader perspective. Entities today are involved in complex financial arrangements that give rise to various types of economic obligations. The most recent liability definitions underscore the economic obligations aspect of the entity. The conceptual frameworks define liabilities as follows:

- Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events (FASB 1985, paragraph, 35)
- Liabilities are the future sacrifices of service potential or future economic benefits that the entity is presently obliged to make to other entities as a result of past transactions or other (AARF, 1992, paragraph, 46).
- A liability is a present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits (IASB, 1989, paragraph, 49).
- Liabilities are the future sacrifices of service potential or of future economic benefits that the entity is presently obliged to make to other entities as a result of past transactions or other past events (NZSA, 1993, paragraph, 7.10).
- Liabilities are obligations of an entity to transfer economic benefits as a result of past transactions or events (ASB, 1999, paragraph, 4.23).

Although there are some differences in wording among them, the definitions are almost similar in terms of their contents. According to these definitions, liabilities have three main characteristics: *present obligations, transfer of economic benefits, and past transactions or events*. The first characteristic states that a liability is a present obligation to transfer economic resources. A present obligation is not the same thing as a future commitment. Obligations to transfer economic resources arise when the entity is not free to avoid making those transfers. Most liabilities are based on legal obligations. But a legal obligation is not a necessary condition. Liabilities may be based on constructive or equitable obligations as well. These obligations arise due to a variety of reasons. In many cases, constructive obligations arise from normal business practice, custom and a desire to maintain good reputations or act in an equitable manner. Legal obligations are not difficult to identify and measure, but it may not be easy to know what constitutes a constructive or equitable obligation.

An entity may take a decision to transfer economic resources on a voluntary basis. But that, by itself, cannot be a sufficient condition for the creation of a constructive obligation. So long as the entity has the power to reverse the decision it has taken, no obligations can arise. Obligations come about when the entity enters into contracts with third parties for the purpose of implementation of the decision. Obligations are sometimes imposed on entities by government or courts to transfer economic resources. For example, tax laws require entities to pay taxes; regulatory agencies require companies to perform certain duties involving payment of cash or utilization of other resources; and courts require entities to bear the cost of waste cleanup or of restoration of environmental damages. If the obligations thus imposed exist at the balance sheet date, liabilities come into being.

Liabilities in most cases are settled by payment of cash or cash equivalents. Settlement of liabilities by means of payment of cash or cash equivalents entails transfer of resources embodying economic benefits. Liabilities can also be settled in ways other than by means of payment of cash or cash equivalents. These include the transfer of non-cash assets, delivery of goods and services, incurring other liabilities, and offset against assets held by the entity in the form of debts due from the party to which a liability is owed. However, in all these cases the settlement of a present obligation involves the entity giving up resources embodying economic benefits.

Liabilities must arise from past transactions or events. Present obligations cannot arise from future events. The obligations that arise from past transactions or past events must exist independently of the entity's future actions. The *transactions or events* clause included in the definitions of liabilities is similar to that included in the definitions of assets. Accordingly, the commentaries that have been made previously with regard to assets are equally applicable to liabilities.

The task of interpreting liabilities has become increasingly complicated due to the proliferation innovative financial instruments. Corporate entities are now using financial instruments that show some of the attributes of both debt and equity⁶. The financial instruments that combine elements of both debt and equity are known as compound financial instruments. Convertible debentures (ie, debentures with an embedded equity conversion option) provide an example of this type of compound financial instruments. Compound financial instruments are also referred to as *hybrid* securities. Besides convertible debentures, there are also several other financial instruments that have hybrid features. These instruments present classification problems if their equity and debt components cannot be segregated on an objective basis.

Ownership Equity

Ownership equity (or simply equity) is a dependent element. Its definition and measurement are based on the definition and measurement of assets and liabilities. In fact, the ownership equity of an entity is the residual interest in the assets of the entity that is obtained after deducting its liabilities. As such, ownership equity is the same as net assets. It implies a proprietary ownership of the entity by the shareholders. The ownership equity of an entity is increased or decreased by increases and decreases in net assets from sources other than investments by owners and distributions to owners. Since ownership equity is not independently defined, any credit item that does not fit the definition of a liability becomes a component of ownership equity. The key aspect of the distinction between a liability and ownership equity is that the latter does not obligate the entity to transfer economic resources. The owners invest in an enterprise with the expectation of benefiting by securing a return on their investment if the enterprise is able to register a

positive performance but bear the risk that the performance of the enterprise may as well be negative.

Ownership equity represents the source of distributions to owners. The *FASB Statement of Concepts No 6* (FASB, 1985, para. 60) defines equity as :

Equity is the residual interest in the assets of an entity that remains after deducting its liabilities. In a business enterprise, the equity is the ownership interest. Equity in a business enterprise stems from ownership rights (or the equivalent). It involves a relation between an enterprise and its owners *as owners* rather than as employees, suppliers, customers, lenders, or in some other nonowner role.

The other conceptual documents also treat equity almost in a similar way. For example, the UK *Statement of Principles* defines equity (ownership interest) as "the residual amount found by deducting all of the entity's liabilities from all of the entity's assets" (ASB, 1999, paragraph. 4.37). According to the *IASC Framework*, "equity is the residual interest in the assets of the enterprise after deducting all its liabilities" (IASB, 1989). In the balance sheet, equity may be presented either by a single line amount or by segregating the various components, as depicted earlier, according to whether they are contributed capital or retained income. Contributed capital may further be sub-classified into legal capital and other capital. Legal capital is reported at par value. Other contributed capital includes share premiums, donated surplus, capital from issue of share options and warrants. This segregation is based on legal concepts and not accounting concepts. If there are no legal restrictions, equity may be presented in the balance sheet by a single line amount. That will, of course, call for additional footnote disclosures.

PRESENTATION OF THE BALANCE SHEET

The balance sheet should be presented in an orderly and systematic manner if it is to be useful and effective in communicating the information it purports to convey. The preparation of the balance sheet involves a high degree of interpretation, abstraction and aggregation. In the process, there may be a loss of significant information. This has to be guarded against. The balance sheet should be presented in a manner as to ensure that the essential message can be detected easily. There are two alternative forms of presentation of the balance sheet: the horizontal form and the vertical

form. The recent tendency is to adopt the vertical form of presentation. One key issue in the presentation of the balance sheet relates to ordering and classification of the sub-elements of assets, liabilities and equity. The classification and order of presentation is not uniform worldwide. There are countries that follow the practice of presenting items in the balance sheet in the order of their liquidity. Examples include Australia and the US. In other countries, the items are presented based on a reverse order. It is customary in many countries to present assets and liabilities on the basis of current and non-current classifications. In some jurisdictions, current and non-current items are further sub-divided into monetary and non-monetary categories. There are some jurisdictions that require companies to assign a separate sub-classification for intangibles. According to practices prevailing in some jurisdictions, assets are sub-classified depending on whether they are held for use or for sale.

The IASC has no mandatory format for the ordering and classification of the balance sheet items. But in its appendix to IAS 1 (IASC, 1997) it provides an illustrative (vertical) format of the balance sheet. According to this format, assets are to be presented first and this to be followed by equity and liabilities. For presentation purposes, assets and liabilities are to be divided into two broad categories: current and non-current. Equity is to be presented by decomposing into capital and reserves.

The presentation of the balance sheet also involves consideration of what additional information should be provided by way of notes to the accounts in order to make balance sheet presentation full and fair. Much of the information provided in the notes to the accounts is aimed at supplementing the figures given in the basic financial statements. One significant aspect of the notes to the accounts relates to the disclosure of accounting policies adopted by the enterprise in the preparation of the financial statements.

IMPLICATIONS FOR THE PROFIT AND LOSS ACCOUNT

Under the balance sheet model, the definitions of assets and liabilities provides the basis of defining profit. As such, the elements of the profit and loss account are defined as changes in assets and liabilities. This inevitably limits the population from which the profit and loss account elements can be selected. In the FASB conceptual framework (FASB, 1985) there are four elements of the profit and loss account (income statement) : revenues, expenses, gains and

losses. The elements, which are actually the agents of ownership equity, link the profit and loss account with the balance sheet. The FASB defines all the profit and loss account elements as changes in assets and liabilities. The definitions are provided below :

Revenues. Inflows or other enhancements of assets of an entity or settlement of its liabilities (or a combination of both) during a period from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations.

Gains. Increases in net assets from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period except those that result from revenues or investments by owners.

Expenses. Outflows or other using up of assets or incurrences of liabilities (or a combination of both) during a period from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations.

Losses. Decreases in net assets from peripheral or incidental transactions and other events and circumstances affecting the entity during a period except from expenses or distributions to owners.

In the definitions cited above, a distinction is made between revenues and expenses on the one hand and gains and losses on the other. The distinction is drawn based on the idea that the operations of an entity can be decomposed into ongoing central operations and peripheral or incidental operations. Revenues and expenses are changes in net assets from the entity's ongoing major or central operations, whereas gains and losses are changes in net assets from the entity's other transactions and events except those that result from investments by and distributions to owners. This distinction between central and peripheral operations may be of relevance in assessing the quality of profit, but for entities that are constantly changing the nature and style of their operations it may not be easy to know where to draw the line.

The IASC *Framework* limits the elements of the profit and loss account to two. These are income and expenses. The definition of income encompasses revenues as well as gains and the definition of expenses embraces expenses that arise in the course of the ordinary activities of the enterprise as well as losses. Both income and expenses are defined as increases (decreases) in assets and decreases (increases) in liabilities. Income gives rise to an increase in net assets, while expenses result in a net assets decrease.

Much controversy exists as to how the elements of the profit and loss account should be classified and disclosed. Revenues and expenses can be classified in the profit and loss account either by function or by nature. For example, under functional classification, expenses are classified according to their function as part of cost of sales, administration and distribution activities. If the other alternative approach is adopted, expenses are to be classified on the basis of their nature such as material costs and staff costs.

The profit and loss account can be prepared based either on a single-step format or a multiple-step format. In the single-step format, there are only one grouping for revenue items and one grouping for expense items. The multiple-step format, on the other hand, sets out various intermediate balances, including amounts of gross profit. It is usually believed that the multiple-step format has more information content than the single-step format.

The way in which financial performance is reported determines to a great extent the usefulness of that information to users of the financial statements. On this point, the UK *Statement of Principles* makes the following observation (ASB, 1999, paragraph, 7.9) :

The financial performance of an entity is made up of components that exhibit different characteristics in terms of, for example, nature, cause, function, relative continuity of occurrence, stability, risk, predictability and reliability. All these components are relevant to an assessment of financial performance and therefore need to be reported on in the statement of financial performance, although their individual characteristics mean that some will carry more weight in some assessment of financial performance than others.

Since users are expected to use the information provided in the profit and loss account to make future projections, they should have a clear idea as to profit sources. It has been suggested that the usefulness of the information provided in the profit and loss account may enhance significantly if there is an adequate basis for enabling users to arrive at an objective basis for determining the aspects of financial performance that have repetitive property and those that lack this.

The Notion of Two Profit and Loss Accounts

There are some changes in assets and liabilities from non-owner sources that affect the ownership equity but do not affect distributable profits. Much controversy exists as to how these changes should

be accounted for. The US FASB in its *Statement of Concepts No. 6* has endeavoured to address the issue by introducing the concept of *comprehensive income*. The FASB's statement of comprehensive income represents an attempt to tie together the Hicksian capital maintenance approach and conventional transactions-based approach to income measurement. The Statement defines comprehensive income as "the change in equity (net assets) of a business enterprise during a period from transactions and other events and circumstances from nonowner sources" (FASB, 1985, para. 70). Comprehensive income includes all recognized net assets changes except those resulting from investments by owners and distributions to owners. In fact, comprehensive income, according to the FASB scheme of things, is the amount by which an entity is better or worse off at the end of a period than at the beginning. Comprehensive income, truly speaking, is an all-inclusive measure of income. According to the FASB document, the objective of reporting this income is to assist the users of the financial statements in assessing an entity's economic activities and the timing and magnitude of its future cash flows. The issue of how to report and display comprehensive income and its components is addressed in FASB accounting standard SFAS No. 130 (FASB, 1997). The standard puts more emphasis on the components of comprehensive income than on its total. This is so because, as the argument goes, a single focus on total comprehensive income is likely to result in a limited understanding of an entity's economic activities.

The FASB's comprehensive income is made up of two components: net income and other comprehensive income. Net income is the income that arises from realized changes in the net assets of the entity, while other comprehensive income consists of items that are not presented on the income statement but affect the ownership equity. Examples of other comprehensive income include foreign currency translation adjustments, unrealized holding gains and losses, prior period adjustments, and pension liability adjustments. According to the standard, the items included in other comprehensive income should be classified based on their nature. The standard does not address the issue of when to recognize or how to measure the items that make up comprehensive income.

The UK ASB in its FRS 3 (ASB, 1993) requires that companies publish an additional primary financial statement, the *Statement of Total Recognised Gains and Losses (STRGL)*, which shows the total of recognized gains and losses so far they are attributable to shareholders. The STRGL, which is similar in many respects to the FASB's statement of comprehensive income, is to be presented with the same prominence as the profit and loss account. The statement

would typically include net profit of the period, surplus on revaluation of fixed assets, surplus or deficit on revaluation of investment properties, and gains or losses on foreign currency translation.

The main problem with two profit and loss accounts relates to the determination of the basis to be used in allocating the gain in net assets between the two statements. Some have tried to answer this question by making a distinction between trading assets and liabilities and fixed assets and liabilities. But that distinction seems not to be a fruitful one. Many have criticized the idea of preparation of two profit and loss accounts by saying that this might cause misunderstanding among users of financial statements. The G4 + 1 Group⁷ of Accounting Standard-Setters has developed a scheme of reporting financial performance that requires that companies present their financial performance in one financial statement. The other proposals contained in the scheme are as follows :

- The single statement of financial performance should be divided into three components: the results of operating or trading activities, the results of financing and other treasury activities, and other gains and losses.
- The practice of reporting the same item of revenue, expense, gain, or loss in two different periods in two different types of performance statements should be dispensed with.
- No distinction should be made between ordinary and extraordinary items.
- Results of continuing operations should be distinguished from discontinuing operations.
- Changes in accounting policies should be reported by retrospectively applying the new policies with restatement of prior periods.

The UK ASB is also now thinking in terms of presenting financial performance by a single statement. Its FRED 22, *Revision of FRS 3: Reporting Financial Performance*, proposes to replace the two income statements by a single performance statement that embraces all the changes in net assets recognized during the accounting period (ASB, 1999). As with the G4+1, the ASB also seeks to divide the performance statement into three sections: operating, financing and treasury, and other gains and losses. The bulk of recognized gains and losses will be covered by the operating section. The financing and treasury section will report those gains and losses that arise on the financing of the entity. These gains and losses include income on the investment of surplus funds. The third section will incorporate other gains and losses. These *other* gains and losses cannot be qualitatively defined because they are made

up of items which do not have much in common with each other. In most cases the last section will include the gains and losses that arise from long-term items held for operating and financing purposes, rather than with a view to benefiting from changes in their value over time.

FRED 22 seems to be a step in the right direction. But to be really effective, its vision should be broadened further. The performance report it visualizes is certainly not going to be a report showing the aggregate change in the value of the entity net assets. The proposed performance statement is designed to show only those changes in entity net assets that are actually recognized in the accounts. Unrecognized changes in asset and liability values will not be reflected on the performance statement. If the performance report is to be the true reflection of real growth of net assets of the entity, it must be based on a coherent and consistent recognition and measurement standard for all assets and liabilities.

CONCLUSION

In this chapter an endeavour has been made to explore the key parameters of the balance sheet model of accounting and to examine its underlying basic philosophies. The balance sheet model has a strong affinity to economics. It seeks to implement, at a very basic level, the capital maintenance concept of profit proposed by economists. The balance sheet model is designed to elevate the purity of the balance sheet over matching. The basic building blocks of the model are assets and liabilities. An item has to meet the definition of an asset or liability before it can be recognized in the accounts. Both assets and liabilities are defined more broadly as sources of future economic value. Assets are seen as probable future economic benefits and liabilities are viewed as probable future sacrifices of economic benefits. According to this model, profit is determined as a measure of change in net assets. In the balance sheet-driven system of accounting, the elements of the profit and loss account (revenues, expenses etc) are defined by reference to movements in assets and liabilities. These elements are introduced in order to capture one aspect of changes in ownership equity. One important feature of the balance sheet model is that it treats ownership equity as a residual interest. It is defined as the excess of assets over liabilities.

Recording and reporting assets and liabilities require a formal recognition and measurement framework. The recognition and measurement issues have not been addressed in this chapter. They are examined in the chapter that follows.

CHAPTER FOUR

Recognition and Measurement of Assets and Liabilities

As we have seen, assets and liabilities occupy the centre-stage in the balance sheet model of accounting. We have also seen that asset and liability accounting involves a three-stage decision process. The first stage in the hierarchy of decisions is to ask whether an item should be treated as an accounting asset or liability. An item should be treated as an accounting asset or liability if it meets the definition. If the item fails to meet the first test of definition, the matter is dropped there and no further action is taken. But if the item passes the definition test, the next issue then comes up for consideration. This is the second stage in the decision process. It involves deciding whether to record the item in the accounts. Items that meet the definition test may be recognized in the accounts. The word *may* is used because recognition does not always follow definition. An item that meets the definition should only be recognized in the accounts if it also meets the criteria for recognition, which constitute some additional hurdles. According to Archer (1997, p.23), recognition is "the process of deciding that an item satisfies the criteria for membership of a particular category of element". Items are *recognized* when they are actually recorded for the purpose of reporting their effects on the financial statements. The FASB *Concepts Statement No. 5* (FASB, 1984) defines recognition "as the process of formally recording or incorporating an item into the financial statements of an entity". According to the UK *Statement of Principles (SoP)*, the term *recognized* means depicting an item both in word and monetary amount and including that amount in the primary financial statement totals (ASB, 1999, p.59). Under the balance sheet-driven system of accounting, the starting point for the financial statement recognition process is the effect on assets and liabilities. Since assets and liabilities are the fundamental elements and since all other elements of the financial statements are defined in terms of changes in assets and liabilities, the recognition of these key elements in the accounts leads automatically to the recognition of the other financial statement elements and their financial statement effects.

The recognition of assets and liabilities involves several stages. These stages are: initial recognition, subsequent remeasurement, and derecognition (ASB, 1999, paragraph 5.1). When an item is depicted for the first time in the financial statements, it is referred to as initial recognition (eg, the purchase of equipment). Subsequent remeasurement takes place when the amount of an already recognized asset or liability is changed (eg, the impairment of fixed assets). Derecognition refers to the process of eliminating an already recognized item from the financial statements (eg, the sale of equipment). The recognition process is usually triggered by transactions. But events other than transactions may also result in the recognition of assets and liabilities. Examples of events that may result in recognition of assets and liabilities include discovery of resources, innovation of new processes, destruction of existing assets due to fire or other natural calamities, and expiration of rights or obligations.

The term *realization* is sometimes used in accounting to mean the same thing as recognition. But that is not true. The two are not synonymous terms. Recognition is concerned with the identification of information that financial statements should report. But, as we have seen earlier, realization is the process of converting non-cash resources into cash or cash equivalents. It is used mainly in the context of recording and reporting of revenues and expenses. Realization may, at best, be treated as a criterion of what may be recognized in certain circumstances.

Once it has been decided that an asset or liability should be recognized in the accounts, it is then necessary to determine the monetary amount at which it is to be carried in the financial statements. This is the third stage in accounting for assets and liabilities. The process of attributing monetary amounts to assets and liabilities are referred to as measurement of assets and liabilities. Recognition is not complete until measurement is performed. Chambers (1966, p. 101) defines measurement as "the assignment of numbers to objects and events according to rules specifying the property to be measured, the scale to be used, and the dimension of the unit". According to the definition, measurement involves: (1) the identification of the object or phenomenon to be measured, (2) the selection of the attribute or property to be measured, (3) the determination of the scale to be used to quantify the object or phenomenon, and (4) the derivation of the quantitative measure. In this context, the selection of the attribute or property to be measured

is considered to be of foremost importance. This attribute selection depends greatly on the purpose for which the measurement is carried out. Although the recognition and measurement issues are usually regarded as two distinctly different issues, sometimes the two issues become inextricably intertwined. There are even circumstances in which the issues of recognition cannot be addressed without first addressing the measurement issues. This is why recognition is viewed by some (eg, Solomons, 1986, p. 126) as being an aspect of measurement. According to Sterling (1985, p. 45), the issue as to when to recognize an element cannot be discussed until the measurement characteristics that are to be recognized are clearly known.

Conceptually, a distinction is sometimes made between measurement and valuation. According to this notion, measurement is confined to past and present and valuation is attributed to future. According to Chambers (1966, p. 46), valuation is a part of the process of choosing and is directed towards future possible consequences. It is personal and entirely subjective. Future cannot be measured; it can only be evaluated. This conceptual distinction is, however, not maintained in accounting practice. For practical purposes, accountants use valuation and measurement almost interchangeably. Consequently, valuation of assets and liabilities tend to assume the same meaning as the measurement of assets and liabilities. In fact, the process of measurement itself is often viewed in accounting in terms of attaching values to objects, events and phenomena. Valuation in accounting is the representation of objects in terms of money and this is viewed as one kind of measurement. The following observations by Hendriksen and Breda (1992, p. 458) may be pertinent in this context :

Measurement in accounting is the process of assigning meaningful quantitative monetary amounts to objects or events related to an enterprise and obtained in such a way that they are suitable for aggregation (such as the total valuation of assets) or disaggregation as required for specific situations.

Although valuation and measurement are used interchangeably in the context of asset and liability accounting, this is not the case with the elements of the profit and loss account. In respect of the profit and loss account elements, the term that is almost always used is *measurement*. Thus the accountant does not *value* revenues, expenses, gains and losses. Instead, he *measures* all these elements. Profit is not *valued*; it is *measured*.



RECOGNITION VS. DISCLOSURE

In recent years there has been a tremendous expansion in the volume of information provided in corporate annual reports. The basic financial statements now contain much more information than before. But much of this information expansion has taken place outside the basic financial statements. Corporate annual reports now incorporate a large number of supplementary schedules and narratives that are aimed at providing users with additional information so as to enable them to better interpret and assess the current status and future performance of the enterprise. While some of the financial disclosures are concerned with providing expanded detail on the items incorporated into the basic financial statements (eg, a breakdown of fixed assets and a breakdown of debts), others are aimed at providing completely new information with new dimensions (eg, management's report to shareholders, segmental data, social performance data, related party transactions, post-balance sheet events, and contingencies and commitments). Supplementary disclosures incorporate not only quantitative data but also qualitative data. The data expansion movement has not stopped. It is expected to continue.

Disclosure of information in footnotes or in any other supplementary section of the financial statements is not recognition. Similarly, the inclusion of information in separate statements that do not articulate with the basic financial statements cannot be regarded as recognition. The term *recognition* is used in accounting to mean formal recognition in the basis financial statements. The basic financial statements may contain figures (eg, parenthetical figures) that are not taken into consideration in the computation of the financial statement totals. They do not qualify as recognition. According to the FASB (SFAS No. 87, para. 116), the elements that qualify for recognition should be recognized in the basic financial statements; disclosure is not an adequate substitute for recognition. In its *SFAC No. 5* the FASB (1985, pp. 3-4) states :

.....disclosure by other means is not recognition. Disclosure of information about the items in financial statements and their measures that may be provided by notes or parenthetically on the face of financial statements, by supplementary information, or by other means of financial reporting is not a substitute for recognition in financial statements for items that meet recognition criteria.

However, if an asset or liability meets the definition but is not eligible for recognition for its failure to meet the recognition criteria,

the disclosure route may be taken. Disclosure is warranted when knowledge of the item is relevant to the assessment of the financial position and performance of the enterprise. The means to be chosen to disclose the information depends on the nature of the information.

A question is sometimes raised as to why there should be a gap between definition and recognition. Ideally, an asset or liability should be incorporated into the accounts as soon as it arises. But this does not happen in practice. When the uncertainty factor is high, recognition is delayed. The existence of a gap between the definition of an asset or liability and its recognition in the accounts is considered by many to be an unsatisfactory aspect of accounting theory and practice. According to Solomons (1986, p. 121), the gap between the definitions of the elements of financial statements and their recognition in those statements is a very troublesome aspect of accounting policy making. In the opinion of many, financial reporting would be much more useful and much more effective if this gap could be reduced to the minimum. Although efforts are now being made to reduce this gap, problems persist. The recognition process is getting delayed in many cases due to the presence of uncertainties.

THE REPORTING ENTITY

The recognition of assets and liabilities first of all requires the identification of the reporting entity and defining the boundary of that reporting entity. It is through the identification of the reporting entity that the area of interest is specified. The boundary of the reporting entity is determined by the scope of its control. If the boundary of the reporting entity is not clearly demarcated, it becomes difficult to determine which assets and liabilities are to be regarded as attributable to it. It is the scope and nature of the reporting entity which determines whether a particular item of resource is within or outside its control. The UK *SoP* (ASB, 1999, ch. 2) attaches a special importance to the issue of the reporting entity. According to this document, the information provided by financial statements will only be useful if the entity that is the subject of those statements is a well-defined economic unit. The *SoP* identifies two types of control: direct control and indirect control. If the direct control principle is applied, it yields an entity which produces single entity financial statements, covering only the assets and liabilities it controls directly. An entity may exercise control over another entity's assets and liabilities through exercising control over that another entity itself.

When control over assets and liabilities is exercised in this way, it gives rise to an indirect control. The application of the principle of both direct and indirect control yields an entity which produces consolidated financial statements, covering all the assets and liabilities it controls directly as well as indirectly. The *SoP* refers to two aspects of control: ability to deploy economic resources, and the ability to benefit from such deployment.

CRITERIA FOR RECOGNITION OF ASSETS AND LIABILITIES

Business enterprises often have many valuable resources that meet the definition of assets yet they are not recognized in their balance sheets. This is so because they do not meet the criteria for recognition in the accounts. Recognition criteria are regarded as a kind of screening device. They provide specifications as to what to record and what not to record. However, if an asset is not recognized in the accounts, it does not cease to be an asset. The asset is then treated as an unrecorded asset. In many business enterprises (eg, knowledge-based enterprises) unrecorded assets count more heavily than recorded assets. Like unrecorded assets, there may also be unrecorded liabilities. An item that fails to meet the recognition criteria at one point in time may qualify for recognition at a later date when it fulfills the required criteria.

The recognition criteria follow directly from the objectives of financial statements and qualitative characteristics of financial information. The objectives of financial statements have been discussed in the last chapter. That chapter has also rendered an account of the principal qualities that make the information provided in financial statements useful for making economic decisions. As we have seen, the principal qualitative characteristics are relevance, reliability, comparability and understandability. The first two qualities relate to contents, while the last two relate to presentation. Relevance and reliability (ie, the content-related qualities) constitute the core of the recognition criteria. If either of these qualities is completely absent, the resulting financial statements will not be able to serve the information needs of users. The way in which relevance and reliability enter into the process of formulation of recognition criteria will be readily apparent from the discussion that follows.

According to the FASB *SFAC No. 5* (FSAB, 1984), for recognition in financial statements, subject to both cost-benefit and materiality constraints, an item must meet the following criteria:

definitions of elements, measurability, relevance, and reliability. The cost-benefit criterion requires that information must be cost-beneficial. In other words, the benefits to be derived from a piece of information must exceed the cost of generation of that information. It is difficult to disagree with such an innocuous statement, but considerable difficulty may arise in determining how the principle should be applied to specific cases or situations. The materiality constraint deals with the size of an error in accounting information. If the error is not large enough to affect the judgement and decisions of the person relying on the information, it can be ignored.

It has already been stated earlier that if an item does not meet the definition test, it does not qualify for recognition in the accounts. The second recognition criterion requires that, to qualify for recognition in the financial statements, an item must have a relevant attribute measurable with sufficient reliability. *SFAC No. 5* refers to five measurement attributes: historical cost, current replacement cost, current exit value, net realizable value, and present value of future cash flows. The measurement attributes are discussed in the next section.

The FASB's last two recognition criteria are relevance and reliability. These criteria are taken directly from the qualitative characteristics of accounting information. Relevant information is information that is capable of making a difference in user decisions. Information is reliable if it is representationally faithful, verifiable, and neutral.

IASC Framework (IASC, 1989, paragraph 83) states that an item that meets the definition of an element should be recognized if:

- it is probable that any future economic benefit associated with the item will flow to or from the enterprise; and
- the item has a cost or value that can be measured with reliability.

An asset or liability is denied recognition if it fails to meet both the tests. According to the first criterion, the future economic benefits associated with the item should be probable. But how should the notion of *probable future benefits* be interpreted? The *IASC Framework* does not offer any definition of *probable*. Generally, the concept of probability is used in those situations that are characterized by uncertainty. The term *probable* means 'more likely than not' (Flower, 2002, p. 305). But there is no confirmation of this in the IASC recognition criteria. The *IASC Framework* is also silent as to whether a higher level of probability should be necessary for the recognition of assets than for liabilities. However, in some of its accounting

standards the IASC offers specific guidance as to how the probability concept should be applied.

The UK *SoP* (ASB, 1999, ch. 5), which devotes a full chapter to deal with the recognition issue under a coherent structure, observes : If a transaction or other event has created a new asset or liability or added to an existing asset or liability, that effect will be recognized if :

- (a) sufficient evidence exists that the new asset or liability has been created or that there has been an addition to an existing asset or liability; and
- (b) the new asset or liability or the addition to the existing asset or liability can be measured at a monetary amount with sufficient reliability.

The criterion mentioned in (a) above insists on having sufficient evidence. Changes in assets and liabilities cannot be reliably reported if there is insufficiency of evidence. The notion, is therefore, related to the qualitative characteristic of reliability. According to the *SoP*, the evidence must be sufficient in both quality and quantity. There are several sources of evidence. They include : (1) the transaction or other event itself, (2) similar transactions or events, (3) currently available information relating to the possible asset or liability, and (4) similar transactions by other entities.

The way in which uncertainty should be dealt with, is extremely important. The *SoP* observes :

In the business environment, uncertainty usually exists in a continuum, so the recognition process involves selecting the point on the continuum at which uncertainty becomes acceptable. The exact location on the continuum will vary, depending on the circumstances.

The second criterion referred to above is also concerned with reliability. But this is related to the reliability of measurement. If there is measurement uncertainty, recognition is not possible.

According to the *SoP*, an asset or liability is wholly or partly derecognized if: (1) sufficient evidence exists that a transaction or past event has eliminated all or part of a previously recognized asset or liability; and (2) although an item continues to be an asset or liability, the criteria for recognition are no longer met

The criteria referred to above are general ones, which are applicable to all situations. In addition to these general criteria there are specific criteria for recognition of specified items of assets and liabilities. For example, intangible assets have to satisfy certain more rigid criteria before they may be considered for recognition in the accounts. Several specific recognition criteria have also been

developed to deal with innovative financial instruments. The specific recognition criteria, which are framed based on the general criteria, are provided in the individual accounting standards.

MEASUREMENT OF ASSETS AND LIABILITIES

Measurement is a crucial aspect of the process of generation of financial reporting information. As has been noted earlier, measurement involves assigning monetary amounts to items that meet both the definition and recognition criteria. In the balance sheet-driven system of accounting, measurement of assets and liabilities constitutes the central focus of attention because all other financial statement measurements are derivative measurements. According to Staubus (1973) the measurement of assets and liabilities "encompasses the measurement of all customary financial statement items because the equity of owners in a business is the excess of its assets over liabilities, while revenues, expenses, gains, losses and funds flows (or changes in financial position) are changes in assets and liabilities". Measurement of assets and liabilities includes both initial measurement and remeasurement. Remeasurement involves revising the amount of an already existing asset or liability. According to the UK *SoP* (1999, ch. 6) :

Measuring an asset or liability entails deciding on the measurement basis to be used and determining the monetary amount that is appropriate for that basis. It may also involve revising the monetary amount when certain events occur.

Although recognition is considered to be more fundamental than measurement, yet the importance of the latter can by no means be denied. In fact, measurability is a precondition for the recognition of assets and liabilities in the accounts. If an item of asset or liability is not capable of being measured in monetary terms, it cannot be considered for recognition in the accounts. In measuring assets and liabilities it is first of all necessary to select a basis for measurement. The *SoP* maintains that the basis selected "will be the one that best meets the objectives of financial statements, and the demands of the qualitative characteristics of financial information, bearing in mind the nature of the assets and liabilities concerned and the circumstances involved" (chapter, 6). As has been mentioned in the preceding chapter, the principal objective of financial statements is to provide potential investors and creditors with information about the enterprise's financial position and financial performance that is useful to them in evaluating the enterprise's ability to generate cash.

Accordingly, the property of assets and liabilities that the users of the financial statements would most likely to know is their cash flow potential. In the case of an asset, it is the potential contribution to future cash flows of the enterprise which is what actually matters. For a liability, the thing that matters is the claim on the enterprise's future cash flows. If this cash flow potential can be directly measured, then there is no problem. In most cases, however, it is not possible to measure future cash flows directly. When direct measurement of future cash flows is not possible, alternative or substitute measures have to be used.

Alternative Bases for Measurement of Assets

Assets can be measured based on a number of measurement bases. They include historical cost, replacement cost, exit price, discounted future cash flow, and some syntheses of these. The present section is devoted to an evaluation of the nature, strength and weakness of the alternative bases of measurement of assets. Since historical cost is the most dominant asset measurement basis the world over, attention is first focused on this measurement basis.

Historical Cost Measurement

The historical cost basis of measurement is the foundation of the conventional matching-based system of accounting. It uses measures that rest upon the transactions that have taken place. An asset's historical cost is formally defined as "the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire it at the time of its acquisition" (IASB, 1989). The qualifying word *historical* refers to the fact that subsequent to the date the asset is acquired, it is reflected in the balance sheet at its past acquisition cost or some derivative thereof. If the asset is a purchased one, its historical cost is past acquisition cost. In the case of a self-constructed asset, historical cost is actual production cost. Under the historical cost basis of measurement, enterprises continue to use historical cost as the basis for valuing assets until the point of sale.

At the date of acquisition, the cost and the value of an asset are likely to be substantially the same. But that identity may vanish on a subsequent date. Under the pure historical cost basis of accounting, no remeasurement is permitted unless this is necessitated on depreciation and obsolescence grounds. The historical cost basis of measurement does not allow the recognition of an asset until

there is a realized transaction. The principal merits of historical cost measurement are its cheapness and greater reliability. The historical cost basis of measurement is possibly the least costly measurement basis. Since historical cost-based measures are supported by documentary evidence of the transactions, they are highly reliable. The audit process is greatly facilitated by the existence of documentary evidence.

The historical cost basis of measurement has heavily been criticized and condemned in the accounting and finance literature. Historical cost-based measures may be based on facts, but they have limited relevance to economic reality. The information provided by the historical cost measurement has little relevance for financial decisions. Historical costs are one type of sunk costs and sunk costs cannot be relevant to decision making. There are also doubts about the alleged *objectivity* of historical cost. The range of expenditures that should be included in an asset's historical cost depends in many cases on personal judgments. In the case of self-constructed assets, all costs may not arise from external arm's length transactions. So the objectivity of such costs can easily be questioned. According to Elliott and Elliott (2002, p. 44) :

Estimation is needed in the case of inventory valuation, assessing possible bad debts, accruing expenses, providing for depreciation, and determining the profit attributable to long-term contracts. So, although it is transaction based, there are aspects of historical cost reporting that do not result from an independently verifiable business transaction.

Historical cost is totally inappropriate or inadequate for the measurement of innovative financial instruments such as financial derivatives. There are certain financial derivatives whose historical costs are totally indeterminate or zero, even though they have a substantial market value. If the historical cost principle is strictly adhered to, most of these financial instruments will not find a place on the balance sheet. The historical cost basis of measurement is also inadequate for the purpose of measuring knowledge-based intangibles. These issues will be explored further in subsequent chapters.

Although historical cost has several demerits, there are some hardcore traditionalists that are still in favour of upholding it as the principal method of measurement in accounting. One of these hardcore traditionalists is Yuji Ijiri. In his various publications (eg, Ijiri, 1967; 1971; 1975; and 1981), Ijiri has tried to uphold historical cost by demonstrating its theoretical as well as practical merits. Ijiri's advocacy of historical cost is founded on two pillars: axioms and

valuation rules. According to Ijiri, historical cost is very useful because it provides the evidence for determining how effective management has been in discharging its responsibilities. He also refers to another important merit of historical cost. This relates to measurement slack. The term *measurement slack* means the extent to which published financial data can be manipulated. In the opinion of Ijiri, historical cost-based financial statements have the least amount of measurement slack. But the validity of this argument can be contested. The issue has been discussed in an earlier chapter.

Historical cost measurement is governed by the assumption that money is a stable unit of measurement. But that assumption is not a correct or valid assumption. Money is not a stable unit of measurement. The purchasing power of money changes over time. If the rate of inflation is high, money loses its purchasing power at faster rate. The contradiction between the assumption that the monetary unit is constant and the actual economic reality causes biases in accounting measurements. If the purchasing power of the monetary unit varies over time, no valid comparisons may be possible between accounting measures that are derived from the transaction prices of different dates. Even when there is no inflation there will invariably be some categories of assets whose price will change. The fact that historical cost-based measures suffer from additivity problem has already been explained while examining the limitations of the matching principle. So that aspect of the deficiency of historical cost is not discussed here any further.

The shortcomings of historical cost-based measures may be overcome to a certain extent if those measures are adjusted for inflation by means of appropriate price indices. The current purchasing power (CPP) basis of measurement is one of those measurement bases whose aim is to adjust historical cost-based amounts for changes in the value of money. In CPP measurement, the figures generated by the historical cost accounting model are adjusted using appropriate price index numbers. The underlying rationale for index number adjustment is that two items should be measured with the same-size monetary unit so that the resultant figures can be aggregated to get a meaningful total. Many are inclined to believe that general purchasing power adjustment is aimed at rectifying valuation errors. But that is a mistaken belief. General purchasing power adjustment is not aimed at reflecting current value. The basic purpose of making the purchasing power adjustment is to measure all the balance sheet amounts with a common measuring unit so that they are amenable to mathematical manipulations. If assets are to be measured at current value, it has

to be done so by reference to current replacement cost, current exit price or discounted cash flow.

Replacement Cost Measurement

Replacement cost measurement is aimed at measuring assets at their current replacement price. The replacement cost basis of measurement is also known as current entry value measurement. An asset's current replacement cost is what it would cost if the enterprise were to replace the asset on a given date. In other words, the current replacement cost of an asset is the amount which would have to be paid for bringing a similar asset into the business. CIMA's *Official Terminology* defines replacement cost as the "price at which identical goods or capital equipment could be purchased at the date of valuation". Under the replacement cost basis of measurement, assets are carried in the balance sheet at their current replacement value. The replacement cost basis of measurement has attracted a lot of support in recent years as an alternative to the historical cost basis of asset measurement. Replacement cost does not measure the cost of the asset acquired. Instead, it measures the cost of replacing the existing asset by another asset that has not yet been acquired. As Revsine (1974, p. 68) states :

Replacement cost balance sheet values represent the amount that a firm would have to pay, as of the balance sheet date, in order to replace the assets shown in the statement or to satisfy reported liabilities.

Replacement cost does not necessarily reflect what an asset might yield if sold in the market. For liquid assets having negligible transfer costs, there may be some closeness between replacement cost and realizable value. Valuing assets based on current replacement cost is performing some kind of a hypothetical exercise. Asset values under replacement cost measurement represent the prices that the enterprise would have to pay if it did not already have those assets. If an identical unit is available in the market, the current buying price of that unit may be used to measure the value of the asset currently being held by the enterprise. But if an identical unit is not available due to technological innovations or some other reasons, the current buying price of an equivalent asset may be used as a substitute. There are two alternative approaches to estimating the price of an equivalent asset. The first approach requires the adoption of the current buying price of an equivalent new asset that is capable of rendering the same service as is being obtained from

the existing one. According to the second approach, the value of an asset not currently available in the market would have to be computed in terms of the cost the enterprise would need to be paid for acquiring another asset of equivalent productive or service capacity.

The main difficulty with the application of the replacement cost basis of measurement is that active second-hand markets are almost non-existent for used equipment and partially processed products. In measuring an asset whose service potential has declined due to use or some other reasons, it becomes necessary to reduce current replacement price by depreciation. But this requires determination of replacement cost new and the portion of the original service potential of the asset that remains available to contribute to future cash flows of the enterprise. The amount to be attributed to the existing asset should be a fraction of the replacement cost new. A great deal of subjectivity is involved in this exercise. The problem could be mitigated if it were possible to develop organized markets for all second-hand assets. Currently, markets for second-hand assets exist for certain standardized assets such as automobiles and office equipment.

The principal merit of the replacement cost basis of measurement is that it takes cognizance of specific price changes. Proponents of replacement cost accounting argue that current replacement value is more compatible with the going concern assumption than historical value. Bedford and McKeown (1979, p. 256) observe :

As to balance sheet valuations for those user decisions which start with the assumption that the entity is a going concern, it appears that the correct valuation of the assets and equities would be in terms of the cost of getting the firm into its current state if the effort to do so were undertaken at the balance sheet date. This (replacement cost) valuation basis would assure comparability among entities, one of the major demands of report users, and would reveal the type of resources which the entity expects to use in its future activities.

Asset values derived based on current replacement costs are considered to pass both the additivity and usefulness tests. Replacement costs are additive because all monetary equivalents are in the same scale. Since replacement cost-based values are current values, they are expected to be more useful than historical cost-based values in providing financial statement users with information for prediction of future cash flows of the enterprise. Replacement cost is often justified as a reasonable surrogate for net present value. According to Revsine (1973, ch. 4), one of the compelling theoretical advantages of replacement cost values is

attributable to the supposed relation between such values and discounted cash flow- based values.

The replacement cost basis of measurement is definitely an improvement over the historical cost basis of measurement, but there are some specific problems associated with it. In replacement cost accounting, there is an underlying assumption that assets will be replaced. That may not always prove to be a valid assumption. Replacement cost is irrelevant if there is no intention of replacing the asset currently being held. In most cases, entities do not expect to continue doing the same sorts of things in the future as in the past. When replacement is not contemplated, replacement cost data can be of little help in providing useful information to users of financial statements. Traditionalists have criticized replacement cost accounting for the main reason that it violates the realization test. Another major point of criticism relates to the subjectivity involved in the determination of replacement costs of used equipment and partially processed products. Advocates of exit price accounting maintain that replacement cost information is irrelevant to most investment decisions because it does not offer any indication as to the ability of the enterprise to adapt to changing economic conditions. That ability, according to exit price advocates, is determined solely by the enterprise's command over financial resources. Current replacement price, unlike current selling price, can never measure an asset's actual purchasing power. Chamber's contention is that "replacement prices are irrelevant on the grounds that replacement may not be in contemplation at any time and may in the event not occur, and they do not indicate the measure of means available for adaptation" (Chambers, 1966, P. 249) Many have also expressed doubt as to the ability of replacement prices to pass the additivity test.

Replacement cost valuations may be useful for decision making if the replacement cost of an existing asset coincides with the present value of the cash flow streams available to the enterprise either from use or from disposition of that asset. Such a situation may arise if there is full equilibrium in the market in which trading is costless and without any major constraints. But, because of imperfections in the market, the spread between the two measures may be substantial for several types of assets.

Exit Price Measurement

The exit price basis is another measurement basis whose objective is to report assets on the balance sheet at their current market value. The aspect of current market value with which the

method is concerned is termed as *current exit value*². An asset's current exit value is defined as "the cash amount that the asset could be exchanged for if sold currently in the ordinary course of business, minus disposal cost, if any" (Parker, 1975, p. 513). Chambers, who happens to be a staunch supporter of exit price accounting, describes this concept as the *current cash equivalent*. The concept is also referred to in the literature as the *net realizable value*. Staubus (1985, p. 64) describes net realizable value³ as "the current price in the market in which the entity either expects to sell the asset or would sell it if required to do so to raise funds quickly, net of costs of disposition". Under exit price measurement, no distinction is made between the changes in exit value that arise from the using up of asset services and those that arise from changing market conditions. According to the advocates of current exit value measurement, current exit value is an objective and dependable measure of value. In the opinion of Sterling (1970), current exit price valuation is: (1) relevant to all financial statement users, (2) reliable, (3) empirically meaningful, (4) additive, (5) temporally consistent, and (6) more informative. In a sense, exit value is the opportunity cost to the enterprise of retaining the use of the asset in its present employment. The next-best alternative form of holding an asset is in cash. If the asset is retained, the opportunity to have sold it is foregone. The selling price foregone is therefore the opportunity cost of the asset to the enterprise. It represents the sacrifice the enterprise makes to hold the asset. When an enterprise decides to hold an asset, there is the underlying presumption that the asset is worth at least its current selling value. According to Arnold and Sherer (1989, p. 13), assets are included in the balance sheet under an opportunity cost approach "not because there is any intention of sale but merely because at the balance sheet date they had not been sold".

Current exit value serves a very useful purpose in providing a basis for assessing the ability of an enterprise to adapt itself to changes in its operating environment. Enterprises operating in a rapidly changing environment are required to continually change their asset combinations or portfolios in order to keep things moving in ways conducive to the attainment of their financial goals. The ease with which they can do this is determined greatly by the amount of cash they can command. Market selling prices of assets provide an indication of the amount of cash that an enterprise can command. According to Chambers (1966, p. 92), "the single financial property which is uniformly relevant at a point of time for all possible future actions in markets is the market selling price or realizable price of any or all goods held". Another important attribute of exit value is

that it possesses the additivity characteristic. The amounts shown on the balance sheet for assets can be properly added because they all represent a single characteristic, that is, the money equivalent.

One very important advantage of the exit price accounting model is that it overcomes the problems of depreciation and inventory valuations. Under this accounting model, depreciation and inventory values are directly determined by the market and not by arbitrary cost allocations.

The Scottish Institute's discussion document, *Making Corporate Report Valuable* (MCRV), advocates the use of exit price as the primary basis for asset measurement. According to the document, financial statements need to reflect economic reality and provide the type of information already required by management to make decisions. MCRV maintains that the preferred measurement basis for assets should be net realizable value because it better reflects the current economic reality. The document identifies two main criteria for selecting a basis for asset measurement. They are additivity and reality (ICAS, 1988, ch. 6). Since all the numbers in exit value system are current selling prices, the additivity test is easily passed. Exit value also passes the reality test "as the value which the assets could be expected to realise is an important economic fact" (paragraph, 6.9). MCRV recognizes certain other specific merits of the exit value basis of measurement (paragraph, 6.20). They include :

- The values assigned to assets may be readily observed in the market place.
- Exit value is a value which is readily understandable by investors and other users of accounts.
- Arbitrary cost allocation decisions are eliminated.
- The use of exit value would ensure a greater degree of comparability among the financial statements of different entities.

Exist price measurement has been criticized for being too subjective. The estimation of exit values for stocks, work in progress, plant and equipment and so on is likely to be highly subjective. Exit price accounting emphasizes only one way of ascertaining asset value, which is by referring to current selling price. Assets that are specific to enterprises are likely to have a low realization value relative to their cost. Under exit price accounting, such assets would be reported on the balance sheet at that low value. But the fact remains that the assets continue to provide benefit to the enterprises through contributing to cash flows. If exit price measurement is

adopted, it becomes necessary to recognize a loss at the time a specialized asset with little resale value is acquired. This gives rise to an absurdity. The asset would definitely not have been bought if the enterprise thought that its acquisition would result in a loss.

Current exit value does not adhere to the going concern concept. This is one important reason why the measurement basis has failed to gather wide support from practicing accountants. According to Weston (1971), current exit price provides relevant information only when the enterprise plans to liquidate its assets. If the enterprise plans to continue in business, exit price has no relevance. In the opinion of Paterson (2000, p. 106), "exit value could be used for all the items in the balance sheet, but this is effectively a break-up basis of accounting that would have no relevance to reporting the position of a going concern". Exit value offers a narrow perspective. The most serious limitation of exit price measurement is that it ignores the concept of use value.

Discounted Cash Flow Measurement

In theory the value of an asset is the value of its future cash flows discounted at a rate which reflects the risk of these cash flows. The discounted cash flow (DCF) basis of asset measurement is founded on this notion of time value of money. Under this measurement basis, the value of an asset is obtained by calculating the discounted net cash inflows expected to be derived from the asset. The DCF-based value is also referred to as *economic value* or *net present value (NPV)*. Canning (1929) describes the present value procedure as a *direct valuation* method because it deals directly with the source of value, which is the future net cash inflows expected to be received from the asset. The determination of the discounted cash flow value of an asset requires the projection of future cash flows related to the asset and discounting those cash flows to the present using an appropriate discount rate. Although the logic of the discounted cash flow basis of measurement is impeccable, it has some serious practical problems associated with it. The problems are not in defining the measure but in actually estimating future cash flows as this implies knowledge of what is going to happen in the future. Problems are also associated with finding an appropriate rate at which to discount future cash flows. Another formidable problem with the discounted cash flow basis of measurement relates to estimation of cash flows of a single asset. In most businesses cash flows result from assets working in

combination. As a result, it often becomes difficult to identify and isolate the cash flows produced by a single asset. On this point, Macdonald (1974, 88) observes :

Fundamentally, how can we attribute net cash flows to particular assets? Only very rarely can cash flows be identified with one individual asset. More commonly it is a collection of assets which give rise to the cash flows and any apportionment between them is completely arbitrary.

The discounting principle is widely used in investment analysis. It is one of the key principles finance managers use in appraising capital investment decisions. But in financial accounting its application has until recently been extremely limited. It is only in recent years that accounting rules are being formulated requiring application of the principle of discounting in the measurement of assets and liabilities. The US FASB has very recently issued a statement, *Concepts Statement No. 7*, on the subject (FASB, 2000). The statement has been developed mainly in order to help those who use present value and cash flow information as the basis for accounting measurement. There are several areas in which accountants use cash flow information. These include discounts and premiums on bonds payable, notes receivable and payable, acquiring assets by incurring liabilities, liabilities assumed in business combinations, pensions, finance leases, and post retirement benefits. The FASB statement applies to measurements at initial recognition, to fresh-start measurements (measurements of carrying amounts that are unrelated to previous amounts), and to amortization techniques based on future cash flows. The statement does not apply to measurements based on the amount of cash or other assets an entity pays or receives or on fair value observations in the market place. It is to be used to develop asset values when there is no contractual cash flow.

The FASB *Concepts Statement No. 7* is different in many respects from the other SFACs. The new statement focuses on measurement with greater specificity than its predecessors. Its scope, however, is quite limited. It applies only to measurements that employ present value. The statement introduces many techniques and ideas that are derived from the principles of economics and finance. The FASB has already incorporated the ideas from the concepts statement in its exposure drafts on impairment of long-lived assets and asset removal obligations.

The discounted cash flow basis of measurement is an ideal basis for measuring the value of an entity as a whole. But measuring

the value of an entity as a whole is not a financial reporting job. Financial reporting is based on asset-by-asset approach. The discounted cash flow basis may be a suitable basis of measurement for those assets that are not used in combination with others. For most financial assets, the discounted cash flow basis of measurement may be an appropriate measurement basis, but it has some serious problems with non-financial assets. This is so because in most cases there is no direct relationship between the future cash flows of the enterprise and the non-financial assets that are currently on its balance sheet. Since most non-financial assets are used in combination to generate cash flows, the discounted cash flow basis of measurement is difficult to use as a general basis of asset measurement in financial accounting.

Mixed Measurement Basis

The mixed measurement approach permits the measurement basis to be selected separately for each category of assets. As has been seen, all the measurement bases discussed so far have inherent problems and weaknesses. Many are inclined to believe that the quality of financial reporting will improve if the assets of an enterprise are measured for external reporting purposes based on the application of the principle of mixed measurement. One approach to the development of a mixed measurement system is to combine historical cost with current value. Under this system, some categories of assets would be measured on a historical cost basis and some on a current value basis. Since there are several measures of current value, it is possible to construct several mixes of historical cost and current value. Historical cost-dominated mixed measurement system is currently being used in many countries. However, a system of accounting that includes both value-based and historical cost measures may lead to contradiction and inconsistency.

A mixed measurement system can also be developed within the broad framework of current value accounting. As has been seen, the current value of an asset can be determined based on current replacement cost (RC), net realizable value (NRV) or net present value (NPV). For some assets, these alternative measurement bases would produce almost similar measures. But for other assets, differences between measures could be highly significant. The measure to be selected should be the one that maximizes the relevance of the current value basis. According to UK *SoP* (ASB, 1999, paragraph 6.7), "(c)urrent value is at its most relevant when

it reflects the loss that the entity would suffer if it were deprived of the asset involved". That measure, which is often referred to as *deprival value*, is determined by the circumstances involved.

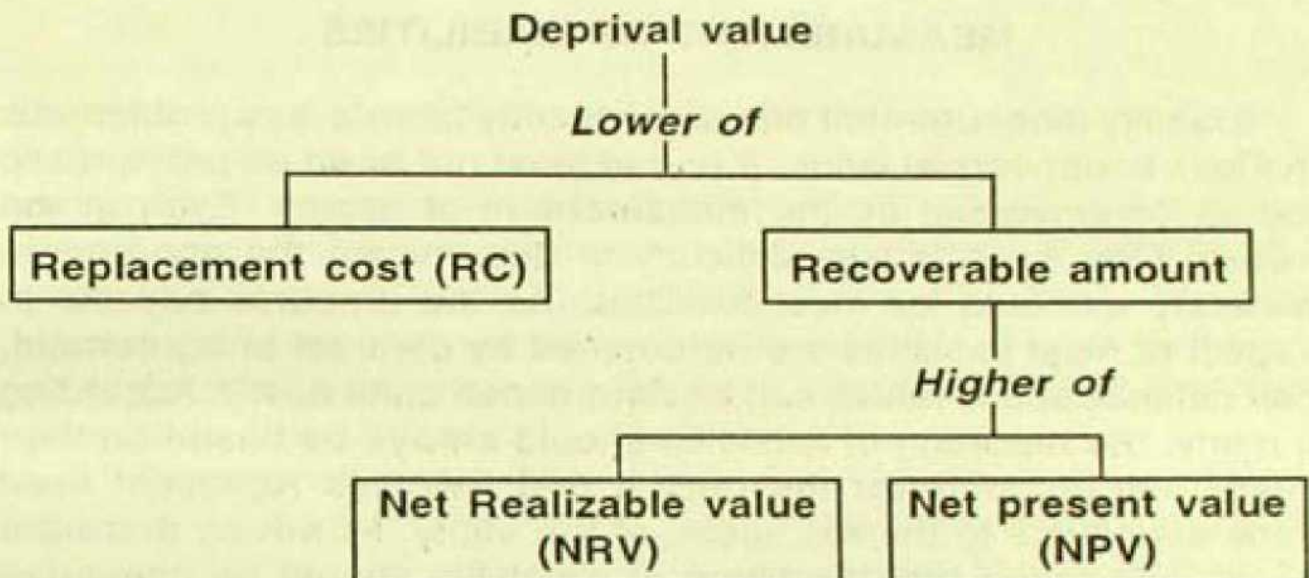
The deprival value concept is a newly developed accounting valuation concept. It has been derived from the concept of *value to the owner* advanced by an American economist, J. C. Bonbright, in his celebrated publication titled *The Valuation of Property* (Bonbright, 1937). Bonbright defined the value of a property to its owner as follows :

The value of a property to its owner is identical in amount with the adverse value of the entire loss, direct and indirect, that the owner might expect to suffer if he were deprived of the property" (p. 71).

Bonbright's concern was not with providing a valuation basis for accounting but with proving a basis for determining legal damages which should be awarded for the loss of assets. The valuation approach developed by Bonbright was subsequently amplified in order to make it relevant to accounting. This amplified version has come to be known as *deprival value*³. According to this concept, the value of an asset is the amount needed to put the deprived owner in the same monetary position as he was before. The deprival value of an asset can never be more than the amount needed to replace the asset. This is so because if the owner were deprived of an asset, he could restore his original position by buying a new asset. But it will not cost this much to put the deprived owner in the same financial position as he was before if the recoverable amount from the asset is less than its replacement cost. If an asset is worth replacing, its deprival value is always replacement cost. If an asset is not worth replacing, its deprival value will be equal to the recoverable amount. The owner of an asset has two alternative courses of action open to him. The first option is to use the asset and the second option is to sell it. Both the acts of using and selling cannot be done simultaneously. If the former course of action is chosen, the other one is automatically rejected, and vice versa. It is economically justified for the owner to sell the asset if selling price is greater than value in use (net present value). But if selling price is less than value in use, the owner would be better off using the asset than selling it. Replacement is contemplated only when it is profitable. To be profitable, an asset must be able to generate a surplus either by resale or use.

In computing the deprival value of an asset it is at first necessary to determine the amount that can be recovered from the asset. The recoverable amount is the higher of net realizable value (NRV) and value in use (NPV). Once the recoverable amount is computed, it

is then necessary to know how much it would cost to replace the asset. If the cost of replacing the asset is less than the amount that can be recovered from it, then replacement cost becomes deprival value. But if the former exceeds the latter, the deprival value of the asset is its recoverable amount. Deprival value is often expressed diagrammatically, as follows :



Historical cost has no role to play in deprival value measurement. The computation of deprival value is based on three valuation measures: RC, NRV and NPV⁴. In most practical situations, replacement cost will be deprival value. Fixed assets are purchased for use in business. Their value in use will, in most cases, be higher than resale value. Since these assets are normally replaced, they will be valued at replacement cost. Inventory is bought for resale. Since selling price of inventory is normally higher than cost price, it is worth replacing. So in this case also replacement cost becomes relevant. This is why deprival value measurement is often described as a modified version of replacement cost measurement. However, though the deprival value of an asset in most cases is its replacement cost, the rationale for the use of replacement price in deprival value measurement is different from that under pure replacement cost system. Replacement price is used in deprival value measurement when replacement is desired for the sake of receiving higher benefits either from use or from sale. If replacement is not economical, the basis of measurement is shifted from replacement cost to recoverable amount. In pure replacement cost system, there is no such flexibility.

Critics of deprival value accounting see deprival value as an unrealistic concept because the enterprise has not been deprived of

the use of the asset. Under the deprival value basis of measurement, some assets would be valued at replacement cost and some at net realizable value or net present value. According to the critics of deprival value accounting, the aggregate balance sheet value produced by the deprival value system is not particularly meaningful because it is a mixture of different concepts.

MEASUREMENT OF LIABILITIES

Liability measurement has until recently been a less problematic and less controversial issue. It has at least not been as problematic and as controversial as the measurement of assets. Even at the present time there is little difficulty in determining the appropriate monetary amounts for most liabilities. As the amounts payable in respect of most liabilities are determined by contract or agreement, their balance sheet values can be determined quite easily. According to many, the reporting of liabilities should always be based on their contractual amounts for the reason that liabilities represent fixed monetary claims to the resources of the entity. However, there are others who argue that the value of a liability should be computed based on reasoning corresponding to the asset's reasoning. Thus if assets are measured based on current value, liabilities should also be measured at current value.

Some measurement challenges for liabilities have arisen in recent years due to the growing complexity of the transactions being undertaken by entities. One of these measurement challenges has come from hybrid securities. Hybrid securities are those securities that contain elements of both debt and equity. For example, many debt securities now contain a feature which enables the holders to convert them, given certain restrictions, into equity shares. Separating the debt and equity components of hybrid securities often appear to be a difficult task. Examples of hybrid securities include convertible bonds, redeemable preference shares, and mezzanine finance⁵.

Other areas that have posed measurement challenges for liabilities in recent years include product warranties, employee pension obligations, debt restructuring and debt defeasance, environmental obligations, leveraged buyouts⁶, and certain types of derivative contracts.

Under the historical cost basis of measurement, a liability is measured based on the amount received in exchange for the obligation, or in some circumstances on the amount of cash or cash

equivalent expected to be paid to satisfy the obligation in the normal course of business (IASB, 1989). If the replacement cost basis of measurement is used for measuring liabilities, the counterpart of replacement cost should be applied. According to this approach, the amount of a liability is equal to the proceeds that would be received at the present time if a debt with equivalent payment schedule were incurred. Put simply, the amount of a liability is the cash that would be obtained if the same obligation were incurred today.

In the net realizable value context, liability measurement could be viewed in terms of the net effect which the current liquidation of a liability would have on the cash balance of the entity. It is the amount that would be required to settle the obligation on the balance sheet date. If the entity has an option to redeem a liability at an amount different from the face value of the obligation, the liability should be reported at that lesser amount. Some exit value proponents are, however, not prepared to report liabilities at amounts other than the contractual obligations.

Theoretically, the ideal value of a liability is the discounted present value of the future net cash outflows that are expected to be required to settle the liability in the normal course of business. For financial reporting purposes, liabilities are usually divided into current liabilities and non-current liabilities. Since current liabilities are payable within a short period of time, the difference between the discounted present values and undiscounted values may not be material. Therefore, such liabilities may be reported at their face amounts. For non-current or long-term liabilities, the difference between the nominal amounts and the discounted amounts could be highly significant. Discounted present values are judged to be the most appropriate values for these liabilities.

Liabilities may also be measured based on deprival value approach. For liabilities, the equivalent of deprival value is *relief value*, which is what the debtor would gain if he were relieved of the liability. According to the UK *SoP* (1999, paragraph 6.9), the relief value of a liability "is the lowest amount at which the entity could divest itself of the obligation involved – in other words, the lowest amount at which the liability could, hypothetically, be settled".

THE CONCEPT OF FAIR VALUE MEASUREMENT

The concept of fair value measurement has received a great deal of attention in the accounting and finance literature in recent years. Accounting standard setters have used the term *fair value*

extensively in many of the pronouncements issued during the past ten years or so. Rules have been formulated in many jurisdictions requiring companies to adopt fair value measurement for certain specified categories of assets and liabilities. Fair value is not any specific accounting valuation basis. It is a generic term with a range of meanings. In fair value accounting, there is the presumption that the entity is a going concern and that transactions are not undertaken on adverse terms. The objective of undertaking the fair value measurement exercise is to establish what the transaction price would have been on the measurement date in an arm's length exchange. Simply stated, fair value is the price at which an asset or liability would be exchanged between a willing buyer and a willing seller. It is basically a marketplace notion. In fact, fair value is just another name of current market value. It is sometimes referred to as *idealized market value*. The accounting concept of fair value is similar in most respects to the concept of *market value* developed by the International Valuation Standards Committee (IVSC)⁷. The IVSC defines market value as "the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion". Since fair value is set by market forces, it is considered to be the most unbiased and reliable measure of value. Business transactions in most cases are carried out at fair value. So fair value measurement is fairly an easy task when it comes to initial measurement. Problems arise when the fair value principle is used in the context of subsequent or fresh-start measurement.

The IASC has used the concept of fair value measurement in many of its accounting standards. In its conceptual framework the IASC recognizes fair value as one of the measurement bases (IASC, 1988, paragraph 100). IASC standards use the concept of fair value in the context of measurement of both assets and liabilities. *IAS 16* (IASC, 1993), which uses fair value in the context of measurement of assets, defines the term as "the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction". In *IAS 32* (IASC, 1995), where fair value is used in the context of measurement both assets and liabilities, the term is defined as "the amount at which an asset could be exchanged, or a liability settled, between knowledgeable and willing parties in an arm's length transaction". IASs use fair value sometimes as a means of determining cost and sometimes as the upper limit to carrying

amount. In some cases, fair value is also used in IASs as a basis for revalued amounts of property, plant and equipment, and financial assets. The most extensive use of fair value is found in the IASC accounting standard on financial instruments, *IAS 39* (IASC, 1999). The standard's main concern is with the asset side of the balance sheet. Under this standard, all financial assets and liabilities are initially measured at cost, which is the fair value of whatever was paid or received to acquire the financial asset or liability. Subsequent to initial recognition, most financial assets are remeasured to fair value. Liabilities are remeasured to fair value only if they are either derivatives or held for trading.

Fair value is also widely used in various FASB pronouncements. In its *SFAC No. 7* the FASB (2000) defines the fair value of an asset or liability as an "amount at which that asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale. The FASB's use of fair value measurement is based on a hierarchy of fair value estimates. In *SFAS No. 140* (FASB, 1999), the key aspects of the hierarchy of fair value estimates are provided as follows :

- Quoted market prices in active markets are the best evidence of fair value. If quoted price is available, the fair value is the product of the number of trading units times that price.
- If quoted market price is not available, the estimate of fair value should be based on the best information available in the circumstances. The facts that should be taken into consideration in developing estimates of fair value include prices of similar assets and liabilities and the results of valuation techniques to the extent available in the circumstances.
- If estimates of future cash flows are used to estimate fair value, those cash flow estimates should be based on reasonable and supportable assumptions and projections. All available evidence should be considered in developing estimates of future cash flows.

The FASB has used the notion of initially measuring assets and liabilities at fair value for a long time. Measuring assets and liabilities initially at fair value is fully consistent with the historical cost model. In recent years, the FASB has extended the notion to fresh-start measurement for certain specified categories of assets and liabilities. It has a plan to bring all financial assets and liabilities under the fair value measurement scheme.

In the UK, the ASB provides for fair value measurement in many circumstances. Its fair value model is basically the same as the *value to the business model* discussed earlier. The ASB requires companies to recognize, in the balance sheet, certain changes in fair values of assets and liabilities while those assets and liabilities are held.

Numerous arguments have been presented favouring the wholesale adoption of full fair value measurement in the context of preparation and presentation of financial statements. But to move towards full fair value accounting is not an easy task. A great deal of work still has to be done on using fair value as the principal basis of accounting measurement. Developing reasonable estimates of fair value may not be a difficult task when there are established markets. But problems arise when there are no outsiders who stand ready to buy the enterprise's assets or assume its liabilities. If established markets do not exist, estimates of fair value may have to be developed based on the best tools that are available in the circumstances.

CONCLUDING REMARKS

The balance sheet model is basically concerned with two financial statement elements — assets and liabilities. In this model, the prime focus is on how assets and liabilities are defined, recognized and measured. The recognition and measurement issues have been addressed in this chapter. The process of recognition focuses on the balance sheet. It is concerned with determining when an asset (or liability) becomes an asset (or liability) for accounting purposes. The recognition process is not the last stage in determining the content of financial statements. That last stage is provided by measurement, which involves the determination of the monetary amounts at which assets and liabilities should be incorporated into the balance sheet. The principal criterion for recognition of assets and liabilities is the certainty of measurement. An asset or liability may not be recognized if it cannot be measured with a reasonable degree of certainty. But what really constitutes *a reasonable degree of certainty* seems not to be much clear. Accounting standard-setting bodies have not yet been able to develop a comprehensive approach towards the resolution of the uncertainty issue.

At the centre of the recognition issue is the reporting entity. The entity that produces financial statements should be clearly specified and its boundary should be properly defined. If there is any ambiguity

as to the nature and status of the reporting entity, it becomes difficult to address the recognition issues on an objective basis. The key to the identification of the reporting entity is control. There are two approaches to the interpretation of the concept of control. Control can be viewed either from a legal or from an economic perspective. The recent tendency is to focus on economic control rather than legal control. The issue of the reporting entity tends to assume special significance in the context of preparation and presentation of consolidated financial statements of a group of companies.

The conceptual frameworks developed by the world's leading accounting standard-setting bodies have devoted much space to addressing the recognition issues. But the documents have miserably failed to address the measurement issues. They simply provide a list of alternative measurement bases without any detailed discussion of their relative merits. Measurement is a vital aspect of the process of generation of financial reporting information. It requires a deeper consideration than has so far been given to it. Accounting standard-setting bodies are now dealing with the measurement problems on an issue-by-issue basis. This approach is not much helpful. The accounting profession needs a consistent, comprehensive model to deal with the problems of accounting measurement. There is growing realization that a fair value accounting measurement model will be more consistent with the need to provide faithful representation of all changes in economic conditions that affect an enterprise's assets and liabilities. Although the increasing use of fair value has become a feature of professional pronouncements, a coherent and consistent approach is still lacking. Now it is time to unify things.

CHAPTER FIVE

Application of the Balance Sheet Model of Accounting : Some Evidence

The objective of the present chapter is to provide evidence of the application of the balance sheet model. The balance sheet approach has far reaching implications for corporate financial reporting theory and practice. In Chapters 3 and 4 we have explored the theoretical issues that are at the heart of the balance sheet-driven system of accounting. The present chapter is concerned with the application side. It is aimed at providing evidence of how accounting standard-setting bodies are endeavouring to promote the balance sheet as the foundation of their pronouncements. As has been mentioned earlier, the matching approach still dominates much of our current thinking. Most of the authoritative statements of how particular types of transactions and events should be reflected in financial statements are still oriented to the notion of matching revenues and costs. But the scenario is now changing. Since the introduction of the conceptual frameworks, the accounting policy-making focus has been gradually shifting from the profit and loss account to the balance sheet. Accounting standard setters are now placing increasing emphasis on the balance sheet in the resolution of conflicting and controversial issues in corporate financial accounting and reporting. They are trying to elevate the purity of the balance sheet presentation over matching revenues and costs. The balance sheet focus is becoming increasingly apparent not only in the newly developed accounting standards but also in many old accounting standards that have been reformatted during the recent years. The orientation of an accounting standard is judged by the fact of whether it focuses on the recognition and measurement of assets and liabilities or emphasizes the effect of the transaction or event on the profit and loss account. Balance sheet-oriented standards reflect an asset-liability emphasis. They focus on the identification of assets and liabilities and the determination of their appropriate balance sheet carrying amounts. Profit and loss account-oriented standards, on the other hand, give primacy to the allocation of the effects of transactions and events to accounting periods.

The present chapter is concerned with providing some specific evidence of the application of the balance sheet model at the



standard-setting level. Since accounting standards are a major determinant of the form and content of financial statements, the financial reporting impact of the balance sheet model may best be judged in terms of its impact on accounting standards. The present exercise is by no means an exhaustive analysis of all the areas of accounting practice where the balance sheet focus has become apparent. Instead, it focuses on some selected issues. Intangibles and innovative (off balance sheet) financial instruments have emerged in recent years as highly problematic areas of corporate financial accounting and reporting. In view of their special significance and importance, these two topics are discussed separately in other chapters. They are therefore excluded from the purview of the present chapter. Our analysis in this chapter begins with deferred taxation, which has been and continues to be a highly complex and controversial topic in accounting. Other important issues addressed in this chapter include employee pensions, provisions, contingent assets and liabilities, proposed dividends, executory contracts, employee share options, and insurance contracts.

DEFERRED TAXES

Deferred taxes are described as postponed tax effects attributed to differences between taxable and accounting profit. The need for introduction of the notion of deferred taxation arises when accounting profit and taxable profit are computed based on different sets of rules. In most countries, net profit computed using GAAP is often different from taxable profit computed using tax rules'. Such a difference may be caused by permanent or temporary factors. Permanent differences arise when items are non-taxable, deductions are not allowed, or special deductions are granted. There is nothing to be done about these differences. Temporary differences, on the other hand, are differences that are expected to affect taxable profit at some future time. In other words, temporary differences are the differences that are expected to reverse. For example, if a company elects to depreciate a newly-acquired machine on a straight-line basis for accounting purposes and on an accelerated basis for tax purposes, tax charge will be lower in the first year than it would have been if based on accounting profit. In subsequent years, however, the tax charge will be higher. The easiest approach to account for income taxes is to adopt the *flow through* method. Under this method, tax liability is recognized based on actual taxes payable for the accounting period as determined by the income tax return. The

amount of tax payable per tax return is the only real world obligation as far as income tax is concerned. This approach does not require any inter-period allocation of tax. Proponents of matching consider this approach to be unsatisfactory because it leads to distortion of post-tax profit. They argue that if actual tax payable is considered as a period expense, it does not fit the pre-tax profit on the profit and loss account. They also criticize the approach for its failure to recognize a liability which will eventually arise. According to them, tax recognition should be based on the principle of correlating after tax-profit with pre-tax profit. Achieving this objective requires inter-period allocation of taxes. The allocation, which involves the introduction of deferred charges and deferred credits, assures that the profit reported on the profit and loss account is charged with the applicable tax regardless of whether this profit is reported for tax purposes or not.

Inter-period tax allocation can be effected either on a comprehensive or on a partial basis. Comprehensive allocation requires the inclusion of tax consequences of all temporary differences in deferred debits and credits, regardless of how significant or recurrent. Under partial allocation, the income tax reported in a period is not affected by the temporary differences that are not expected to reverse in the future.

Under the balance sheet approach, income tax is accounted for by the asset-liability method. Tax expenses arise from changes in balance sheet values. The method regards income tax expense as being the sum of the changes in deferred tax asset and liability balances and the current provision for income taxes as determined by tax return. The underlying intent of the method is to accrue and report the total tax benefits or tax obligations that will actually be realized or assessed on temporary differences when they reverse. The US FASB in its accounting standard *SFAS No. 109* (FASB, 1992) adopts this approach to accounting for income tax. The standard shifts the analysis away from matching and focuses attention on assets and liabilities. It requires the deferred tax liability to be accounted for on the basis of the full liability which the enterprise will eventually have to meet. Under the standard, a change in expected liability will result in an expense in the profit and loss account. According to the FASB, deferred taxes under the asset-liability method meet the conceptual framework definitions of assets and liabilities. The FASB seeks to rationalize its approach by saying that deferred taxes measure the future resource flows that result from transactions and events that have already been recognized in

the financial statements. *SFAS No. 109* requires separate recognition and measurement of deferred tax assets and liabilities using the average enacted tax rates for future years. According to the standard, the deferred tax asset should be reduced by a tax valuation allowance if available evidence indicates that it is more likely than not that some portion or all of the deferred tax asset will not be realized.

The IASC has also adopted an approach similar to that of the FASB. But there are some differences between the FASB and IASC requirements. *IAS 12* (IASC, 1996) requires that an enterprise should, with certain limited exceptions, recognize a deferred tax liability or deferred tax asset whenever the recovery or settlement of the carrying amount of an asset or liability would make future tax payments larger or smaller than they would be if such recovery or settlement were to have no tax consequences. One of the main exceptions is that no deferred tax liability should be recognized if it arises from goodwill, the amortization of which is not allowable for tax purposes. Under *IAS 12*, deferred tax liability is to be accrued for nearly all taxable temporary differences, and deferred tax asset is to be accrued for all deductible temporary differences if it is probable that a tax benefit will be realized. Current and deferred tax assets and liabilities are to be measured using the tax rate applicable to undistributed profits.

The UK ASB's new accounting requirements with regard to deferred taxation are almost similar to those contained in *IAS 12*. *FRS 19* (ASB, 2000) has drastically changed the rules contained in its predecessor standard, *SSAP 15* (1992), which had required a partial provisioning of deferred taxation. Under new rules, deferred tax must be fully provided for on most types of timing differences. The standard seeks to ensure that future tax consequences of past transactions and events are recognized as liabilities or assets in the financial statements. It allows enterprises to discount the deferred tax assets and liabilities to reflect the time value of money. The ASB states that its approach to deferred tax accounting is fully consistent with its balance sheet model. There are, however, some key differences between *FRS 19* and *IAS 12*. The UK standard does not in general require deferred tax to be provided for when assets are revalued or adjusted to their fair values on the acquisition of a business. It allows deferred tax liabilities that will not be settled for some time to be discounted to reflect the time value of money. *IAS 12* prohibits this.

Although the accounting standard setters claim that their approaches to accounting for deferred taxation are compatible with

the balance sheet model, some are doubtful about the validity of this claim. For example, Paterson (2000, p.108) argues that deferred taxation is basically an application of the matching principle and that it does not fit the definition of an asset or liability. According to him, deferred taxation should be totally abolished if the conceptual purity of the balance sheet is to be maintained.

EMPLOYEE PENSIONS

Nowadays it is a common practice among large companies, especially those in developed countries, to establish pension plans to provide income to employees after their retirement. Pension plans involve difficult financial accounting and reporting issues because they require a wide range of estimates, judgements and assumptions about future cash flows. There are two broad types of pension plans: defined contribution plans and defined benefit plans. Under defined contribution plans, the employer company promises to contribute a certain amount into the plan each period. No commitments are made as to the ultimate benefits to be paid. These benefits depend on the pension fund performance. Defined contribution pension plans do not present difficult accounting problems; their accounting is rather simple and straightforward. As the contributions are fixed, the cost of providing pensions is clearly determinable. But that is not the case with the defined benefit pension plans. The accounting of these pension plans is highly complicated. In a defined benefit pension plan, the amount of pension benefits to be provided to retirees is defined by the terms of the plan. In most cases, the amount of benefits retirees will receive is determined by formulas involving actuarial variables like predicted retirement age, life expectations, employee turnover rates, future salary levels, future returns on pension plans, and vesting provisions². Pension plans may be funded or unfunded. In a funded pension plan, the employer contributes cash to the pension fund. Generally, pension funds are managed by trustees, who invest the contributions and meet the pension commitments. Defined contribution pension funds are usually funded, but defined benefit pension plans may be funded as well as unfunded.

There are two key accounting issues related to defined benefit pension plans: how to determine pension plan expenses and how to recognize and report the employer's obligations towards employee pensions. The past practice has been to account for employee pensions based on the revenue-expense approach. Its primary focus has been on expense smoothing. But that practice is now changing.

Accounting standard-setters are now trying to solve the pension accounting problems using the asset-liability approach. Under this approach, assets and liabilities are measured at their current values. The asset-liability focus first became evidenced in the US FASB accounting standard *SFAS No.87* (FASB, 1985), which reoriented sponsor pension accounting towards balance sheet liability recognition. This approach has since been adopted by several other accounting standard-setting bodies. The asset-liability focus seems to have become more prominent in the UK accounting standard *FRS 17* (ASB, 2000a), which closely follows the revised International Accounting Standard *IAS 19* (IASB, 1998). The UK standard, which has replaced *SSAP 24: Accounting for Pension Costs* (ASB, 1984), introduces a market-based approach to valuation rather than actuarial values. The main objective of *FRS 17* is to ensure that financial statements reflect at fair value the assets and liabilities arising from an employer's retirement benefit obligations and any related funding and that the operating costs of providing retirement benefits to employees are recognized in the accounting period in which the benefits are earned by the employees, and the related finance costs and any other changes in the value of the assets and liabilities are recognized in the accounting periods in which they arise. Under this standard, defined benefit scheme assets are measured at market value rather than actuarial value and defined benefit scheme liabilities are discounted at a high-quality corporate bond rate rather than at the expected return on assets. The standard also requires companies to recognize actuarial gains and losses immediately in the statement of total recognized gains and losses for the period. *FRS 17* is intended to be consistent with the ASB's intention to introduce a broader concept of performance measurement based on fair value accounting.

PROVISIONS

Provisions are a highly debatable topic in accounting. There exists a great deal of controversy as to what does and what does not constitute a provision. Provisions are important because they often have a substantial effect on an enterprise's financial position and performance. Simply stated, provisions are obligations of uncertain timing and amount. They are often referred to as *quasi-liabilities* because they are, as Stolowy and Lebas (2002, p. 442) put it, "obligations for which either the triggering event may not come from a transaction with a third party, or the timing of the obligation

may not be clear, or the amount may not be well defined, or any combination of the three". Enterprises make provisions for a variety of reasons and they serve a variety of purposes. Provisions are made for product warranties, potential environmental liabilities, future operating losses, and future restructuring. Many enterprises use provisions as a tool of profit management or profit smoothing. It is common practice among enterprises to create large provisions in periods in which profits are high and to release them in periods in which performance is unsatisfactory. Provisioning can be easily practiced if matching constitutes the key driver in financial reporting. The matching approach permits provisions to be related to management intention. But the role of provisioning is heavily restricted in the balance sheet-driven system of accounting. In this system, management intention is not a valid ground for creating provisions. Provisions can be created only when there are legal or constructive obligations resulting from past events and which require economic resources to settle.

In the UK, provisions are currently being dealt with by *FRS 12* (ASB, 1998). The general approach that the standard adopts in the matter of accounting for provisions is a balance sheet-driven one. It focuses on the definition and measurement of liabilities and is less concerned with the measurement of profit. The central principle of the standard is that a provision should be recognized only when there is an unavoidable requirement to transfer resources to a third party, that is, there is a liability. It does not allow the creation of general provisions as a means of engaging in *big bath* accounting³. *FRS 12* has been developed as a joint project with the IASC, which has also developed its own accounting standard on this subject, *IAS 37* (IASB, 1998). According to *IAS 37*, a provision is "a liability of uncertain timing or amount". Both *FRS 12* and *IAS 37* treat provisions as a subclass of liabilities and not a separate element in their own right. There are certain specific criteria or conditions that must be fulfilled before a provision may be included in the financial statement totals. The conditions ensure that a provision is recognized only when an enterprise has an obligation that requires the transfer of measurable economic benefits in settlement. This condition is satisfied when there is a legal contract involved. But legal contract is not an essential condition. There can also be obligations in the absence of legal contracts. These are called constructive obligations. Such obligations arise when the enterprise creates a valid expectation on the part of other parties that it will discharge its responsibilities towards them either because of its past actions or because it has

clearly stated that it will do so. Another specific condition for the creation of a provision is that it must have arisen from a past event. If the conditions are not met, no provision should be recognized. Provisions should always be adjusted to reflect the current best estimate. If it is no longer probable that a transfer of economic benefits will be required to settle the obligation, the provision should be reversed. Some examples are provided below in order to demonstrate how provisions are recognized and measured under the balance sheet view.

Provisions for Environmental Damages

The activities of an enterprise may cause environmental contamination. But the fact that environmental contamination has been caused by the activities of the enterprise does not in itself give rise to an obligation to rectify the damage. Under the balance sheet approach, the setting up of a provision to rectify environmental damages is required only when there is a legal or constructive obligation to that effect. An enterprise may have an intention to incur expenditure to reduce pollution in the future, but it cannot set up a provision for that. This is because the enterprise can avoid the expenditure by its future actions.

Restructuring Provisions

Enterprises sometimes undertake schemes for restructuring part or whole of their undertakings. Restructuring schemes are aimed at materially changing the scope of doing business or altering the processes of production of goods and services. The events that fall under the definition of restructuring include sale or termination of a line of business, closure of business locations, changes in management structure, and fundamental reorientation. Under the balance sheet view, a restructuring provision can be created only when there is a constructive obligation to carry out the restructuring. An obligation cannot be created solely by a decision of the management. But under the matching approach, restructuring provisions can be created based on management intention.

According to *IAS 37*, the restructuring provision amount should be calculated so as to reflect estimates of only the direct expenditures arising from the restructuring, which are those that are both (a) necessarily entailed by the restructuring; and (b) not associated with the ongoing activities of the enterprise (paragraph 70).

In the US, restructuring provisions are governed by a number of accounting standards. The basic rule relating to recognition of

restructuring provisions is that enterprises should create a liability when management has a formal restructuring plan. The liability includes estimates for costs of eliminating product lines, relocating plant, employee severance costs, employee training costs and new system costs.

Provisions for Repair Expenses

In many countries (eg, Germany) it is a common practice to charge the expected repair expenses of the first few months of the following year in the current year's profit and loss account by creating provisions. The practice very well matches the matching principle. This is so because the expenses are due to wearing out of plant and equipment in the current year. But if the balance sheet approach is adopted, this practice becomes unacceptable. Under this approach, no provisions for expected repair expenses can be created because there is no third party obligation at the end of the current year.

Self Insurance

Self-insurance is absence of insurance. An enterprise may decide not to insure against business risk even when insurance is available. If the enterprise elects not to insure, it is running a risk it does not have to run. However, by not insuring the enterprise is at the same time saving the money it would otherwise be required to pay towards insurance premiums. If no claims are received in, the profit of the period increases by the amount of the insurance premiums saved. An enterprise may decide not to insure if the estimated amount of average annual claims is less than annual insurance premiums. The question that arises is: How should a self-insurer account for losses? The answer to this question depends on whether we take the profit and loss account or the balance sheet view. Under the profit and loss account view, there can be accrual for loss from self-insurance risks even when there are no claims. That is, the self-insurer can even out the impact of losses by creating annual provisions. But accrual for loss from self-insurance is not possible when the balance sheet view is adopted. Under the balance sheet view, no provisions can be created until claims are received.

Future Decommissioning Costs

Enterprises are at times required to incur huge costs for terminating operations and dismantling plant and equipment. Oil producing enterprises provide a good example in this context.

Enterprises in the business of extracting oil often find themselves in the position of having to incur substantial costs for decommissioning oil rigs at the end of their lives. Under the matching approach, an amount for these costs could be constructed by regular debits to the profit and loss account over the life of the asset and carrying these to a provision account. But the balance sheet model offers a different treatment for such costs. Since the obligation to meet the decommissioning costs is present from the point of original commissioning, the balance sheet approach requires such costs to be included in the cost of the asset and capitalized. Under this approach, it is also necessary to recognize the associated liability in the balance sheet. Requirements to this effect are contained in the UK accounting standard *FRS 12* (ASB, 1998). The standard requires decommissioning costs to be included in the cost of the asset and capitalized, provided that the other tests for capitalization are met. The standard also requires inclusion of the associated liability in the balance sheet. The International Accounting Standard *IAS 37* (IASB, 1998) requires the recognition of the full amount of provisions for decommissioning costs when a legal or constructive obligation arises. But the standard is silent on the issue of whether the costs should be debited to the asset (rig) account.

CONTINGENT ASSETS AND LIABILITIES

Contingent assets and liabilities are not normally recognized in the accounts. Information about such assets and liabilities are, however, provided by way of notes to the financial statements. Contingent assets are rights or claims to resources whose existence is not certain. *IAS 17* (IASB, 1998) defines a contingent asset as "a possible asset that arises from past events and whose existence will be confirmed by the occurrence of one or more future events not wholly within the enterprise's control" Contingent assets usually arise from unplanned or other unexpected events that give rise to the possibility of an inflow of economic benefits to the enterprise. Examples include pending court cases, proposed dividends (receivable), and grants and donations. Contingent assets are not recognized in the accounts. The UK accounting standard *FRS 12* (ASB, 1998) contains specific provisions prohibiting the recognition of contingent assets. The International Accounting Standard *IAS 37* (IASB, 1998b) also imposes a similar restriction. Recognition of contingent assets should take place only when the realization of the related economic benefits is virtually certain. At that point, the

contingent asset does not remain a contingent one; it becomes an unqualified asset. Contingent assets may be disclosed in footnotes if the probability of realization is very high.

Contingent liabilities are potential claims on an enterprise's resources. Such liabilities arise from litigation, threat from expropriation, claims arising from product warranties, and catastrophic losses of property. *IAS 37* defines a contingent liability as :

A possible obligation that arises from past events and whose existence will be confirmed by the occurrence of one or more uncertain future events not wholly within an enterprise's control; or a present obligation that arises from past transactions but is not recognized because : (1) it is not probable that a transfer of economic benefits will be required to settle the obligation; or (2) the amount of the obligation cannot be measured with sufficient reliability.

If an obligation is probable, it is not a contingent liability. Instead, it is a firm liability. For such an obligation, a provision is needed. But if the amount of the liability cannot be reliably assessed on the balance sheet date, the second part of the test is not met. So no provision should be made. For example, if an enterprise is sued by a customer for injury caused by the enterprise's product and if it is probable that the enterprise will lose the case and incur damages, the first test is met. But if the outlay necessary to settle the obligation cannot be measured with sufficient reliability, the second condition for liability recognition is not met. In a situation like this, no provision can be created.

Enterprises are required to disclose information about their contingent liabilities in the notes to the accounts. The notes should provide detailed information as to the nature, estimated financial effect, extent of uncertainty and the possibility of reimbursement. Providing such detailed information is necessary in order to enable financial statement users to assess the future prospects and problems of the enterprise. However, no disclosures of contingencies are necessary if the possibility of loss is remote. This is an area where management judgement has an important role to play.

PROPOSED DIVIDENDS

Proposed dividends are normally recognized as liabilities on the balance sheet. The legal obligation of an enterprise to pay dividends arises when the proposal from the directors to the shareholders is formally voted on at the annual general meeting. Until that event occurs, the enterprise has no legal obligation to pay the dividend.

Since the dividend proposal made by the directors may be turned down by the shareholders, there is also no constructive obligation. Thus, proposed dividends do not satisfy the definition of liabilities. This being the case, no provisions can be created for such dividends. The IASC's revised accounting standard *IAS 10* (IASC, 1999) addresses this issue. According to the standard, if dividends are proposed or declared after the balance sheet date, an enterprise should not recognize those liabilities at the balance sheet date. The standard, however, permits disclosure of proposed dividends either on the face of the balance sheet as a separate component of equity or in the notes to the financial statements. Under the old *IAS 10*, enterprises were permitted, but not required, to recognize proposed dividends as liabilities. The main argument that the IASC provides in support of its new stand is that recognizing proposed dividends as liabilities is not consistent with its *Framework*.

EXECUTORY CONTRACTS

Executory contracts present many serious accounting problems. Accounting standard-setting bodies have not yet been able to develop effective mechanisms for dealing with all sorts of executory contracts. Executory contracts are mutually unperformed contracts. They involve exchange of contractual rights and obligations. These contracts exit in several different forms. Examples include leases, employment contracts, long-term purchase agreements, hedge contracts, and commodity future contracts. Under the traditional accounting practice, executory contracts are not recognized in the accounts. The main argument advanced in support of this position is that no binding exchange has yet occurred; both parties have merely exchanged promises. Another reason for not recognizing an executory contract is that the right and the obligation offset each other. The US APB *Statement No. 4* (AICPA, 1970, paragraph 181) maintains :

An exchange of promise between the contracting parties is an exchange of something in value, but the usual view in accounting is that the promises are offsetting and nothing need be recorded until one or both parties at least perform(s) under the contract.

Contracts that fall within the realm of accounting are performed contracts. When both parties to a contract perform their acts (eg, purchase of goods for cash), there is an event that warrants recognition in the accounts. Accounting recognition is also warranted when only one of the parties to a contract performs an act (eg,

purchase of goods on credit). But when neither has performed, the rights and obligations created by the contract are not recognized in the accounts. Non-recognition would be justified if either party has the right to cancel the contract without having to pay any compensation. When the contract is a binding one, there is no reason why it should be totally omitted from the financial statements.

Since executory contracts are being extensively used by modern enterprises as an instrument of transferring resources, it would be inappropriate to ignore them altogether. Some say that only the net position in an executory contract should be shown on the financial statements. For example, if the obligation of a purchase commitment exceeds the value of the goods to be acquired, the differential is net obligation and that net obligation should be recognized on the financial statements. But others consider this practice to be deficient on the ground that it does not reflect the total amount of an enterprise's rights and obligations. Many argue that rights and obligations arising from executory contracts meet the definitions of assets and liabilities and, as such, they should be recognized in the financial statements. According to Miller and Islam (1988, paragraph 5.15), "the exchange of promises included in an executory contract is a past event; most contracts give rise to probable future economic benefits and control of a contractual right exists when the contract becomes a firm commitment". The Australian Accounting Research Foundation (AARF) argues that assets that arise from agreements equally proportionately unperformed would need to be recognized where: (a) it is probable that, in respect of the assets, the service potential of future economic benefits arising from the agreement will eventuate; and (b) the amounts of those assets can be measured reliably (AARF, 1992).

The booking of executory contracts has started, though on a limited scale. Lease accounting is the beginning of the recognition of an exchange of contractual rights and obligations. It is through the recognition of exchanges of contractual rights and obligations that accounting standard-setters have been able to put many off balance sheet items on the balance sheet. The issue is explored in detail in Chapter 7.

LOSSES OF DEVELOPMENT STAGE ENTERPRISES

Development stage enterprises are enterprises that are devoting substantially all of their efforts to the establishment of new business. It may take considerable time for such enterprises to commence their

principal revenue generating operations. Even after commencement of principal revenue generating operations, the enterprises may take further time to derive significant revenue from their operations. There is controversy as to how the losses the development stage enterprises incur while in the development stage should be accounted for. Proponents of matching would argue in favour of treating some of the expenditures incurred by a development stage enterprise as investments in the future and would require capitalization of such expenditures. The balance sheet approach does not endorse this treatment because the expenditures do not give rise to identifiable assets. The US FASB has a specific accounting standard on this subject, *SFAS No. 7* (FASB, 1975). According to the standard, reporting on the activities of a development stage company should not differ from any other type of organization.

What about the treatment of pre-opening expenses? Under the matching-based approach, pre-opening (preliminary) expenses may be capitalized and amortized over a number of periods. This practice is not compatible with the balance sheet model. Pre-opening expenses do not constitute an asset because there is no resource with a future economic benefit.

GOVERNMENT GRANTS

Government grants are "assistance by governments designed to provide an economic benefit in the form of transfer of resources to an enterprise in return for past or future compliance with certain conditions relating to the operating activities of the enterprise" (IASB, 1995, paragraph 3). Governmental financial assistance may come in the form of transfer of cash, transfer of non-monetary assets, remission of liabilities, or forgiving of loans. There are various reasons why governments give grants. For example, governments may grant financial assistance for establishing units in backward areas or for providing training facilities for unemployed people. Most of the grants enterprises receive from governments or government agencies can be classified into two categories: revenue-related grants and capital-related grants. In any case, government grants are non-reciprocal transfer of resources under which the transferor does not directly receive approximately equal value in return. The current accounting practice in most countries determines the treatment of government grants using the matching-based principles. According to these principles, recipients are required to recognize government grants as income over the periods necessary to match them with the

expenses they intend to compensate. If the grants are capital in nature, they are to be spread over the related asset's useful service life. This means that a deferred income is to be recognized. The practice is not consistent with the balance sheet model because it misstates the assets and liabilities of the enterprise. Under the balance sheet model, there cannot be anything like deferred income. If there is no obligation to return the amount received under government grants, no liabilities can be recognized.

If the balance sheet model is strictly adhered to, it would require most capital grants to be recognized immediately as income when received rather than spread over the related asset's useful service life. Revenue grants under this model would be recognized as income before the related expenditure is incurred. The G4+1's discussion paper⁴, *Accounting by Recipients for Non-reciprocal Transfers, Excluding Contributions by Owners*, argues in favour of this approach. It requires that the recognition of non-reciprocal transfers should be determined by the definitions and recognition criteria for assets and liabilities, with the recognition of revenues being determined as a consequence. The application of this approach would mean reporting a grant's full amount as revenue in the period in which it is made.

In its newly developed accounting standard on agriculture, the IASC (2001) has established rules for government grants related to agricultural activity. The standard requires that an unconditional grant related to a biological asset measured at fair value less estimated point-of sale cost be recognized as income when the grant becomes receivable. If the grant is conditional, it should be recognized as income when the conditions attaching to it are met.

EMPLOYEE SHARE (STOCK) OPTIONS

Share (stock) option schemes⁵ have become increasingly popular with enterprises the world over as a means of compensating employees. Employee share options are incentive compensation devices whereby an employee is given a right to buy a certain number of shares at a certain price over a number of years. Employee share option schemes are usually viewed as an important aspect of a broader concern to allow employees to participate in the enterprise in which they work. These schemes have proved to be highly effective in aligning the interests of an enterprise's managers with those of its shareholders. Granting share options is one way of remunerating employees⁶. Consequently, this remuneration should

be accounted for in the same way other types of employee remunerations are accounted for. There is, however, a significant difference between cash compensation and share option compensation. Unlike the cash compensation, the real value of the share option compensation is difficult to determine with any reasonable degree of accuracy. Granting share option compensation does not amount to any cash outflow. But it undoubtedly is a very significant economic event that affects the enterprise performance. Currently, enterprises are able to pay their employees in share options without having to recognize an expense in the profit and loss account. The non-recognition of the expense affects not only the profit and loss account but also the balance sheet. In the early 1990s, the US FASB issued an exposure draft that would have required enterprises to account for fair value of share option compensation in their profit and loss accounts. The exposure draft prompted a storm of protest that threatened even the very existence of the FASB. Consequently, the FASB was rather forced to modify its proposals. The modifications have been effected not for any conceptual reasons but on political grounds. Under the existing FASB rules, companies are allowed to continue accounting for employee share options as before, but must provide disclosure of proforma net income and earnings per share numbers using an estimate of the fair value of the options granted (FASB, 1995).

Share option grants represent a real cost to the shareholders. The granting of share option compensation results in the shareholders' giving up a certain portion of market capitalization. Accounting standard setters are now grappling with the problem of how to recognize share option compensation transactions in the financial statements. The UK ASB has in collaboration with the other member bodies of the G4+1 group developed a discussion paper on the subject. One of the conclusions of the paper is that employee share options should be recognized in the accounts. The paper also addresses the measurement issue. It says that the appropriate measurement basis is the fair value of the options issued. If fair market value is not available, option pricing models may be used.

The IASC's 2001 discussion paper, *Accounting for Share-based Payments*, deals with the transactions under which an entity obtains goods or services from other parties, including suppliers and employees, in return for shares or share options issued to those other parties. It proposes that such transactions should be recognized in the financial statements, with a corresponding charge to the profit and loss account, when the goods or services are consumed.

The paper also proposes that the transactions should be measured at the fair value of the shares or options issued. According to the paper, the measurement date should be the date on which the other party becomes unconditionally entitled to the options or shares. The International Accounting Standards Board (IASB), the successor to the IASC, is expected to promulgate an International Financial Reporting Standard (IFRS) on the subject of share-based payment very soon. It has tentatively agreed that enterprises should be required to apply fair value measurement method to all types of share-based payment transactions, including employee share-based payment⁷.

The Canadian Accounting Standards Board has very recently issued a new accounting standard that requires stock options to be recognized at a fair value. Under the new rules, enterprises are required to recognize stock options awarded to non-employees or to employees who participate in stock appreciation rights plans, at fair value as an expense⁸.

INSURANCE CONTRACTS

There does not exist at the present time any comprehensive accounting model to deal with insurance contracts. Current accounting practices differ markedly from country to country and sometimes within a country. Moreover, these practices are highly conservative. They fail to capture the economic realities underlying insurance contracts. The development of an appropriate accounting model that produces transparent, informative and comparable information concerning insurance contracts seems to be an immediate necessity. The IASB has recently declared its intention to produce a comprehensive accounting standard on insurance contracts. Its current project on the subject is aimed at radically reforming insurance accounting. The project covers not only the accounting treatment by the insurer but also by a corporate policyholder.

One of the key recommendations contained in the *Issues Paper* published on the subject is to dispense with the deferral and matching model currently in use in most jurisdictions and move to the asset-liability model. Under the deferral and matching model, general insurance liabilities would be recognized as a combination of (1) an unearned premium liability; (2) a liability for claims incurred; and a provision for any premium deficiency. The model requires acquisition costs to be deferred and amortized as it was earned over the term of the policies in force. One important reason why the

deferral and matching model is rejected is that it fails to provide a cohesive and comprehensive basis for resolving financial reporting issues relevant to insurance contracts.

Under the asset-liability model, the amounts recognized in the balance sheet relating to insurance contracts must meet the definition of assets and liabilities and must also satisfy the specified recognition criteria. The *Issues Paper* advances two versions of the asset-liability model. The first version requires that liabilities should be measured at fair value. According to the second version, they should be measured at an enterprise-specific value to be developed based on the own assumption of the enterprise. The document maintains that the use of the asset-liability model will result in a proper recognition of all prospective cash flows predicted for each contract, with allowance being made for any that may arise from the implementation of guarantees or from the exercise of options. The paper proposes to adopt the fair value accounting model for measuring insurance contract-related assets and liabilities. If the fair value model is accepted, it will require fair value changes to be recognized in the profit and loss account. Patel (2001, p. 105) describes the merits of the proposed insurance accounting framework thus :

An international insurance standard based on the asset/liability model would overcome many of the problems of current accounting for insurance contracts by producing financial statements that are more transparent. Combined with additional disclosures, this would provide existing and potential shareholders and other users of the accounts with a more reliable view of current results and longer-term profitability.

There are many unresolved issues in insurance accounting. Those issues have to be resolved first before any endeavour is made to promulgate a definitive accounting standard on this subject.

INVESTMENT PROPERTIES

Investment properties constitute one special group of tangible fixed assets. These properties are different in nature from properties held for an enterprise's use and occupation. *IAS 40* (IASB, 2000) defines an investment property as a property that is held by the owner or by the lessee of a finance lease to earn rentals or for capital appreciation or both. Properties held for sale in the ordinary course of business does not fall within this definition. Since the objectives of holding investment properties are different from the objectives of

holding normal properties, they call for a different accounting treatment. *IAS 40* requires recognition of investment properties as assets when they meet the normal asset recognition criteria. It gives enterprises the choice of adopting either a fair value accounting model or a historical cost-based model for their investment properties. Fair value is defined, as in other IASs, as the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction. According to the IASC Board, fair value gives the users of financial statements more useful information about investment properties than other measures, such as depreciated historical cost. If the fair value model is adopted, it will be necessary for enterprises to measure their investment properties at fair value and to recognize fair value changes in the profit and loss account. Enterprises choosing the cost-based approach are required under *IAS 40* to disclose the fair value of their properties in the notes to the accounts. The IASC Board believes that rental income and changes in fair value is inextricably linked as integral component of an investment property's financial performance and, as such, measuring it at fair value and reporting fair value changes as profit is necessary to give the most relevant and transparent view of its financial performance.

The accounting treatment of investment properties in the UK is currently governed by SSAP 19: *Accounting for Investment Properties* (ASC, 1981). The standard requires investment properties to be included in the balance sheet at their *open market value*. It does not permit market value changes to be included in the profit and loss account. Instead, it requires such changes to be treated as a movement on an investment revaluation reserve. The ASB is now thinking of bringing its accounting requirements relating to accounting for investment properties in line with those of the IASC.

BIOLOGICAL ASSETS

Accounting for biological assets – living plants and animals held for agricultural activity — is dealt with in *IAS 41* (IASC, 2000a). This is the lone accounting standard in the world to deal with the issue. Accounting standard setters in other jurisdictions are yet to come up with a standard on the subject. The standard requires biological assets to be measured at fair value less estimated point-of-sale costs, except where fair value cannot be measured on a reliable basis. It also requires the inclusion of fair value changes in net profit or loss. The IASC Board believes that fair value and changes in fair

value provide more relevant information about the future financial prospects and performance of enterprises engaged in agricultural activity than the traditional historical cost-based measures of assets and profits. According to *IAS 41*, agricultural activity is the management of the biological transformation of biological assets for sale, into agricultural produce (such as milk or fruit), or into additional biological assets (offspring). Industries falling within the *IAS 41*'s definition of agriculture include forestry, livestock management, and crop management. Since the patterns of biological transformation often differ significantly in timing from the patterns of cost incurrence, the historical cost-based model is incapable of reflecting the effects of biological transformation when they occur. The difference between the historical cost-based model and the fair value model is likely to be particularly significant in the case of agricultural activity that takes a very long period from initiation to harvest. Enterprises engaged in growing trees in plantation forests would be unable to recognize any profits until the first harvest if they are required to account for their activity under the historical cost-based model. Under the fair value model, enterprises engaged in agricultural activity would be required to report their profits based on a continuous valuation of their growing crops and livestock, rather than waiting for the realization of revenues.

IAS 41 is applicable only to biological assets; it does not apply to the land related to agricultural activity. Nor is it applicable to intangible assets related to agricultural activity. Land related to agriculture is to be accounted for based on the requirements set forth in *IAS 16: Property, Plant and Equipment* (IASB, revised 1997a) or *IAS 40*. *IAS 16* allows agricultural land to be reported either at revalued amount or at cost less any accumulated impairment losses. Intangible assets related to agricultural activity is to be accounted for based on the rules set forth in *IAS 37: Intangible Assets* (IASB, 1998b).

Problems may have to be encountered in the computation of fair value for some biological assets. *IAS 41* describes several bases for measuring fair value. Fair value can be measured easily if there is an active market. If an active market exists, the quoted price in that market can be used as a fair value. In the absence of an active market, fair value may be computed based on recent market transactions and market prices for similar assets. In other cases, fair value may have to be determined on the basis of the present value of expected net cash inflows from the asset.

REVALUATIONS

Revaluations provide a mechanism of periodically revising the value of those assets that are not subject to fair value accounting. Accounting rules in many countries permit enterprises to adopt the policy of periodically revaluing their fixed assets based on accepted techniques. There are some countries (eg, France) that make revaluations a mandatory exercise. Revaluation is aimed at removing some of the deficiencies of historical cost measurement. In the UK, revaluation is a long-standing corporate accounting practice. It has the sanction of company legislation. *FRS 15* (ASB, 1999), which is the UK's first comprehensive accounting standard on fixed assets, endorses revaluations. It says that where an entity chooses to revalue tangible fixed assets, the valuation should be performed on a consistent basis and kept up-to-date. According to the standard, assets subject to policy of revaluations should be included in the balance sheet at their current value and gains and losses on revaluation should be recognized on a consistent basis. The most significant aspect of the new accounting standard relates to its outlawing of *cherry-picking*. In the past, companies in the UK could freely pick and choose which of their assets they wished to revalue and when. Under the new standard, that freedom is not allowed; if a company wishes to adopt the policy of revaluations, it must revalue the whole classes of similar assets. The standard does not insist on annual valuations. It does, however, require that the full valuations of the assets should be performed every five years with the assistance of qualified external valuers.

FRS 15 is compatible with the IASC standard on the subject, *IAS 16*. The IASC allows but does not require companies to revalue their land and buildings, and plant and equipment. Its benchmark treatment is, however, cost-based measurement. *IAS 16* requires that, where a policy of revaluations is adopted, the revalued tangible fixed assets should be carried at fair value. According to *IAS 16*, fair value is current market value or depreciated replacement cost where there is no evidence of current market value. The standard permits different measurement bases to be used for different classes of fixed assets. For example, an enterprise may elect to value land and buildings at fair value and plant and equipment at cost.

The US rule in this respect is different. The FASB does not permit upward valuations of tangible fixed assets. Subsequent remeasurement of these assets in the US should be based on historical cost.

The revaluations issue is currently being examined in a project undertaken jointly by some national standard setters. The objective of the project is to provide recommendations on a convergence model for revaluations that should be adopted internationally.

Impairment of Assets

Impairment of an asset is a reduction in its recoverable amount below the balance sheet carrying amount. Accounting standards have been formulated in many jurisdictions specifying requirements as to how asset impairment should be dealt with. The principal objective of these standards is to ensure that an asset is not carried in the balance sheet at an amount that is higher than the value of the future economic benefits that it is expected to generate. This latter value is called the asset's *recoverable amount*. If the balance sheet carrying amount of an asset is less than its recoverable amount, the asset is to be written down to this latter amount. But if the recoverable amount is higher than the balance sheet carrying amount, the asset's value is not to be written up to the recoverable amount.

The International Accounting Standard on the subject is *IAS 36* (IASC, 1998a). It deals mainly with accounting for impairment of goodwill, intangible assets and property, plant and equipment. Under this standard, enterprises are not required to assess all their assets in a detailed impairment review every year, but are required to check, every year, whether there are any indications that any assets are in fact less than the carrying amount. The fundamental requirement of the standard is that an impairment loss should be recognized whenever the recoverable amount of an asset is less than its book value or carrying amount. An impairment loss should be recognized as an expense in the profit and loss account for assets carried at cost and treated as a revaluation decrease for assets carried at revalued amount. According to the IASC's scheme of things, an asset's recoverable amount is the higher of its net selling price and value in use.

The UK accounting requirements relating to impairment of assets are set out in *FRS 11* (ASB, 1988a). The standard has been formulated with the objective of introducing a note of reality in the valuation of fixed assets. There is the expectation that the standard will eliminate the practice of treating long-standing losses of fixed assets with no realistic hope of recovery as temporary. According to the standard, fixed assets and goodwill should not be carried in the balance sheet at no more than their recoverable amount. The

standard points out that impairment occurs because something has happened to the fixed assets themselves or in the economic environment in which the assets are operated.

FRS 11 does not require enterprises to perform regular impairment reviews of fixed assets. Instead, it requires them to carry out such a review only if events or a change in circumstances indicate that the carrying amount of a fixed asset may not be recoverable. According to the standard, impairment loss should be recognized in the profit and loss account.

Under the US financial reporting requirements, which are set out in *SFAS No.121* (FASB, 1995), enterprises are required to use a *recoverability test* to determine whether an impairment exists. There are some differences between the international and US rules in the matter of computation of recoverable amount. Otherwise, the basic principles are almost the same.

Carrying out impairment tests is an exercise in valuation. But it is restricted to downward valuation. Upward valuation is permitted only when there is a reversal of previously recognized impairment losses. According to Flower (2002, p. 366), the rule is deliberately prudent and asymmetric.

REVENUE RECOGNITION

Revenue recognition provides the basis for recording revenues. It is an issue of crucial significance in the context of measurement of periodic profit. The current practice of revenue recognition is governed by conservatism. It is based on the general principle which requires that revenue should be recognized when it is earned. But this principle has become inadequate to deal with the way businesses are now generating revenue. The growing complexity of business transactions has made it necessary to develop a comprehensive and consistent model that can be usefully and effectively applied to various types of revenue-generating activities. The International Accounting Standard that is currently governing the recognition of revenue in common types of transactions is *IAS 18* (IASB, 1993)). Generally, the recognition of revenue should take place when it is probable that future economic benefits will flow to the enterprise and when these benefits can be measured reliably. The standard deals with revenues that arise from three types of transactions or events: sale of goods, rendering of services, and interest royalties and dividends from the assets of the enterprise. It provides guidelines as to when revenues from various sources may

be recognized. But its orientation is towards matching and it emphasizes prudence and realization. The standard is inadequate in the sense that it fails to offer clear specifications as to how to separately account for various elements in transactions involving multiple elements. Moreover, the standard does not always lead to consistent answers.

In the USA, the FASB has no single accounting standard for revenue recognition applicable to all enterprises. Instead, it has a number of accounting standards, most of them industry-specific, setting out rules as to how enterprises should recognize their revenues under different circumstances. For example, the FASB has separate accounting standards relating to franchise fee revenue (*SFAS No. 45*), revenue recognition when right of return exists (*SFAS No. 48*), product financing arrangements (*SFAS No. 49*), record and music industry (*SFAS No. 50*), cable television companies (*SFAS No. 51*), motion pictures (*SFAS No. 53*), and sale of real estate (*SFAS No. 66*). The policy of addressing the problems of revenue recognition on an issue-by-issue basis has some limitations. The FASB has acknowledged these limitations and is now thinking of developing a single comprehensive revenue recognition model that can be applied to all situations and circumstances.

The UK ASB has very recently published a discussion paper as a first step towards achieving its declared objective of coming up with a single general accounting standard on revenue recognition that all enterprises can apply on a consistent basis. The ASB believes that such a standard is necessary in order to ensure consistency in financial reporting. This discussion paper adopts a balance sheet-based approach to revenue recognition. According to the ASB, a balance sheet-based approach to revenue recognition is necessary because the matching-based approach, which is based on accruals and prudence, is no longer adequate to deal with the growing complexity of business transactions. Revenue recognition in the matching-based system is driven by the consideration of direct identification of revenue-producing activities. In the balance sheet-oriented system, revenue is defined as an increase in net assets. Under this system, the starting point for the revenue recognition process is the effect that the transaction or other event involved has had on the enterprise's assets and liabilities. In this scheme of things, revenue recognition is a by-product of the recognition of assets and liabilities. Strictly speaking, the asset-liability model does not need any separate rule for recognition of revenue. Revenue should automatically result as the other side of double-entry bookkeeping.

This is so because any increase in net assets that occurs from non-owner sources is revenue. But since the asset-liability model is currently being applied on a partial and selective basis, complete guidelines are lacking as to how revenue-generating transactions and events should be recognized and measured. The ASB project on revenue recognition is designed to address the complex issues such as sale of goods with warranties, sale of goods with rights of return, barter transactions, and rights to receive uncertain amounts. The main thrust of the ASB paper is that revenue should be recognized when performance takes place and its amount should be based on the most likely amount of consideration.

CONCLUSION

The purpose of this chapter has been to provide evidence of how the balance sheet model is being used in the formulation of financial reporting requirements. An examination of a number of recent and important accounting standards, exposure drafts and discussion documents of the leading accounting standard-setting bodies of the world provides evidence of increasing commitment to the balance sheet model. It also indicates that, owing to the balance sheet orientation favoured by these bodies, there has been greater willingness to emphasize valuation in measuring financial position and performance. Although the scope has been rather narrow, the findings thereof should be convincing. It seems that accounting standard-setters have been able to demonstrate that attaining conceptual purity in balance sheet presentation is more important than attempting to match costs and revenues in the "best" possible way.

Further evidence of the application of the balance sheet model is provided in the next two chapters. Chapter 6 addresses issues pertaining to recognition and measurement of intangible assets and Chapter 7 deals with off balance sheet transactions.

CHAPTER SIX

Recognition and Measurement of Intangible Assets*

The issue of intangibles has always haunted accounting rule-makers and other accounting regulatory agencies. Considerable time and effort have been spent searching for an appropriate solution to the problems of recognition and measurement of intangibles, but controversy continues. In recent years there has been a dramatic increase in investment in intangibles. Enterprises have invested huge sums of money in resources that lack visibility. Intangibles now represent a growing proportion of resources of many enterprises. But most of these resources are not reported in their balance sheets. The existing accounting rules have difficulty in coping with the intangibles enterprises are currently using in conducting their operations. Intangibles constitute the subject matter of this chapter. The principal aim of the chapter is to explore the key issues involved in the recognition and measurement of intangibles and to examine how far the balance sheet model can be useful in solving the problems of accounting for intangibles. It begins by looking at the emerging scenario with regard to growing importance of intangibles in economies and businesses.

THE INCREASING IMPORTANCE OF INTANGIBLES

As we enter the twenty-first century, the economy has undergone a great transformation. The industrial age-economy has been transformed into what is now being described as the *information age- or post-industrial economy*. Although the transformation process is not yet complete, many startling changes have already taken place. The economy has literally become weightless. In this weightless economy, the emphasis has shifted from machines, materials and other physical resources to information and knowledge. The whole basis of wealth creation has changed and everything has become fast and dynamic. More and more economic activity has become invisible and intangible. The economic progress and prosperity of a

* This chapter draws heavily on an article published in the December 2002 issue of *Indian Accounting Review* (Basu, 2002).

country is no longer dependent on its ability to manipulate physical resources and facilities. It is true that physical resources and facilities are still being used in the process of production of goods and services, but they no longer are at the heart of the system. They have lost their central, critical importance to make way for information and knowledge. The focal point in the new economy has shifted from exploitation of physical objects to exploitation of knowledge-based resources and their efficient and effective management. With the new focus has come a new set of rules for conducting economic operations. The information revolution has enabled societies to substitute knowledge-based resources for physical resources in many spheres of economic activity and in many areas of generation of wealth. Huge economic benefits are now being created from resources whose principal ingredients are information and knowledge. These are the resources that cannot be touched, seen, weighed or counted. The changes have affected the way people live and work and the way enterprises are created and operated. They have even altered the concept of wealth.

In the new economy, the rules of business have changed. Enterprises are now doing business and creating wealth in significantly different ways. They are now conducting their operations using technologies, relationships, models, and mathematical algorithms heretofore unknown in the history of evolution of business. The revolution in information technology, particularly the internet revolution, has changed the entire basis of achieving success in business. One of the key distinguishing features of the new economy business is the increasing dependence on soft assets called intangibles. These invisible assets¹ are replacing hard assets at a very faster rate than ever before. Hard assets are still there but their importance has considerably declined. Organizations now rely more on dematerialized soft assets than on hard assets as a means of doing business and creating competitive advantage. This is happening not only in developed countries but also in developing countries. In many enterprises intangible assets have become the most strategically important resources and the key driver of value. Most of the worth of these enterprises is locked up in assets that have no physical attributes. Intangible assets such as knowledge, relationships, brands, competence, and systems now take the centre-stage in most high-tech engineering, pharmaceutical and service organizations. Some of the world's highly-valued companies own nothing of value except intangibles. The new economy has given birth to a kind of virtual organizations that have practically no visibility. They are little

more than some relationships and some boxes of contracts; one can describe what they do but one cannot see them. These organizations aren't the visible, tangible, obvious places which they used to be (Handy, 1997, p. 378). For these organizations, there is practically nothing tangible or physical at all to own.

Intangible assets are growing daily in importance. Enterprises are now using lesser and lesser physical assets to generate a given quantity of economic value. The increasing sales-to-physical-assets ratio provides evidence of this. Intangible assets are replacing physical assets as a basis for producing goods and services and generating value. But since most intangible assets go unrecorded and unreported, it is not easy to provide exact measures of the extent to which enterprises are depending on these assets. Some rough estimates are, however, possible. One of such rough estimates is the spread between market capitalization and book value. The market capitalization of an enterprise is computed by multiplying the share price prevailing at the time of measurement by the number of shares (equity) outstanding at that time. Book value is balance sheet value, which is computed by deducting recorded liabilities from recorded assets. For example, Infosys Technologies Limited, an Indian software company, reported net assets of Rs.2080cr as on March 31, 2002². On the same date, its market capitalization was Rs. 24,654cr. This represented a gap of Rs. 22,574cr. Analysts attribute much of this gap to Infosys' unrecorded intangibles. As the figures indicate, the book value of the company represents just 8 per cent of its market capitalization. The procedure mentioned here can be used to estimate the value of unrecorded intangibles not only at the individual enterprise level but also at the aggregate industry level as well as the level of the whole economy. For obtaining indications of how intangibles are growing in importance in business operations, the behaviour of the ratio of book value to market capitalization may be studied and evaluated over a number of periods.

The above method of measuring the hidden value of the enterprise has some obvious limitations. It is too sensitive to stock market fluctuations. If the stock market behaves irrationally, it will give a misleading indication about the true worth of the enterprise. Moreover, if book value is seriously distorted due to inflation, the spread between book value and market capitalization cannot be attributed solely to intangibles. Another limitation of the procedure is that, it does not give any indication as to the individual components of the intangible assets enterprises are using; it tells the story of what

is happening at the aggregate level. To arrive at estimates concerning the components, other procedures have to be applied. However, if the objective is to obtain rough estimates as to the extent to which enterprises in the new economy are relying on intangible assets, this procedure is possibly the most convenient one.

A more refined approach to measuring the intensity of intangibles is to apply Tobin's q , which was introduced by the Nobel laureate economist James Tobin in 1969³. This q stands for the relation between market capitalization and the replacement value of the physical assets. The relation is expressed as: Market Capitalization = $q \times$ Replacement Cost of All Assets. For example, if q is 5 then market value will be 5 times higher than the replacement value. The principal difficulty with this technique is that it requires computation of the replacement costs of the assets of the enterprise. Since assets are generally stated in the balance sheet at historical costs, it may not always be easy to develop their replacement value estimates on an objective basis. This is why the former approach is usually preferred to the latter one. In fact, most of the measures generated in recent years as to the growing dependence on intangibles in business operations appear to have been derived based on the book value approach.

According to a recent estimate, 50-90 per cent of the wealth created by business firms comes from sources associated with the utilization and management of intangible assets (Hope and Hope, 1998). An Arthur Andersen research into 10,000 public companies reveals that by 1998, less than 30 per cent of their market capitalization was represented by book value. Put another way, more than 70 per cent of the book value of these companies fell outside the formal financial reporting framework. The position was completely different just 20 years ago. At that time, book value provided more than 90 per cent of market capitalization⁴. The change is indeed a very remarkable one. The study attributes much of the missing value to unrecorded intangible assets. Another study by the Financial and Management Accounting Committee (Dzinkowski, 2000, p. 32) reveals almost a similar picture as to the growing importance of intangible assets in business operations. The study reveals that hard assets represented 62 per cent of market capitalization in 1982, but with the passage of just 10 years the figure dropped to 38 per cent. The ratio has dropped further since that time; it has now become less than ten per cent (Elliott and Elliott, 2002, p. 481). Microsoft, a US-based multinational company, provides a classic example with regard to the missing intangible asset value. The company became

the world's most highly valued business in 1998. By January 1, 2000, the market value of the company had climbed to some \$600 bn. The book value of the company at the end of third quarter of 1999 was only \$31.3 bn⁵. This means that the company's market capitalization was more than 19 times its balance sheet value. Bill Gates, the founder of the company, explained the phenomenon by saying: "Our principal assets, which are our software and our software-development skills, do not show up on the balance sheet at all"⁶.

A few years back, Coca-Cola Inc. reported a book value of equity of \$8.4bn. Its market value at that time was \$165bn⁷. Much of this huge difference is attributable to the value of Coke's brand, which is an intangible asset. GlaxoSmithKline provides another interesting example in this context. By the end of 2001, this pharmaceutical giant had net assets of £9bn. But the market at that time placed a value of £120 bn⁸ on the company. As usual, the gap represented the market's perception of the value of the company's investment in research and development activity and certain other intangibles.

These are just a few examples of how intangible assets are growing in importance. There has always been a gap between market capitalization and balance sheet value, but now that gap has become a formidable one. As Edvinsson and Malone (1997, p. 2) remark, the gap between the book value and market value is now turning into a chasm. There is growing concern about this gap. It is true that book value and market value are established based on different considerations, but that does not detract from the fact that the market is placing huge values on the new economy business assets. The current accounting model captures some of the intangible assets that new economy enterprises are using, but they are only a few; many valuable ones are ignored. Moreover, the few intangible assets that the current accounting model is able to capture are reported in an inadequate fashion; they are reported at amounts that tell very little about their real economic worth. Flower has very recently analyzed the balance sheet data of the world's 50 largest multinational enterprises in order to examine their asset structures. The analysis shows that intangible assets represent less than 7 per cent of the total assets of these enterprises (Flower, 2002, pp. 372-74 and p. 550). This computation tends to offer a clear indication as to how the current accounting model is failing to capture the economic reality of the new economy businesses. The traditional accounting model may be able to capture those identifiable intangible assets that are acquired from external sources through market transactions, but it can say little about those intangibles that are

developed internally. The most troublesome aspect of accounting for internally developed intangible assets relates to the determination of when and how such assets come into being. Since these assets are not directly observable, they have to be apprehended indirectly. But the traditional accounting model has difficulty in coping with this indirect way of recognizing and reporting assets. Another formidable accounting difficulty with regard to the recognition and measurement of intangible assets stems from the fact that many such assets, especially those that are characterized by knowledge intensity, are highly mutating; they change their characteristics fairly rapidly.

Almost all the accounting standard-setting bodies of the world have requirements relating to recognition and measurement of intangible assets. But they are not adequate to deal with the intangible assets new economy enterprises are leveraging in their activity and operations. These pronouncements are basically concerned with the recognition and measurement of some traditional intangible assets (eg, goodwill, patents copyrights, trademarks and licences) that are acquired from external sources through market transactions. They are unable to deal effectively with the intangibles that are developed internally.

THE NATURE AND CHARACTERISTICS OF INTANGIBLE ASSETS

Intangible assets are difficult to define in categorical terms because they have no single, all-pervasive quality. A generally agreed concept is that intangible assets are assets which do not have a physical substance but have value to the business. Intangible assets generally represent rights, privileges, assemblages of data and know-how, and benefits of possession. The word *intangible* has its origin in the Latin word *tangere* the meaning of which is *to touch*. Intangible assets are therefore assets that are incorporeal; they are incapable of being seen, touched, counted, and weighed. The most well-known form of an intangible asset is goodwill. Items such as brands, computer software, copyrights, franchises, licences, patents, relationships, secret processes and formulas, and trademarks provide other examples of intangible assets. Of these intangibles, the trade mark is possibly the oldest. For accounting purposes, intangibles are classified into two broad categories: identifiable intangibles and unidentifiable intangibles. Identifiable intangibles are again sub-divided into acquired intangibles and internally developed intangibles. There is some confusion as to how financial or paper

assets should be classified. Since financial assets have nothing tangible about them, they could also be included in the list of intangible assets. But accountants do not treat financial assets as intangibles. Instead, they include these assets in the tangible category. In any case, for an asset to be classified as an intangible asset, it must first of all be an asset. As has been noted earlier, assets are resources controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. The definition does not require an item to be a tangible one in order to qualify as an asset. In other words, the definition does not imply that an item has to have a particular form in order to become an asset. The asset-making character of an object derives from the fact of its ability to render future economic benefits. In other words, the essence of an asset is that it is a source of future economic benefits. Intangibles can very well be regarded as assets if they promise to bring usefulness to the enterprise which controls them. Physical character is not relevant to asset determination. As it is aptly put by Hendriksen and Breda (1992, p. 634), intangibles are no less assets just because they lack substance. If a material object has no future service potential, it cannot become an asset despite its having physical characteristics. On the other hand, if a non-material object is capable of producing future economic benefits it may very well be regarded as an asset even though it lacks body. In real practice, what is accounted for as an asset in accounting is future service potential, and not the forms in which the attributes are embodied. Future service potential is not any tangible phenomenon. The feature that it represents has nothing of tangibility in it. According to Flower (2002, p. 551), in a fundamental sense all assets are intangible assets.

Since there is currently no agreed framework for thinking about intangible assets, considerable difficulty is encountered in specifying how the borderline between tangible and intangible assets should be drawn. The IASC in its accounting standard *IAS 38* (IASC, 1998c) defines intangible assets as "identifiable non-monetary assets without physical substance held for use in the production or supply of goods or services, for rental to others, or for administrative purposes". The standard distinguishes between intangible resources and intangible assets. If an intangible resource does not meet the definition of an intangible asset, it is not recognized in the balance sheet. One key feature of the IASC definition of intangible assets is *identifiability*. This constitutes an additional requirement. An intangible asset must be *identifiable* in order to qualify for recognition

in the accounts. Identified intangible assets are assets that are separately identified and linked with specific rights or privileges. Identification first of all requires assigning a descriptive title. An asset can be identified easily if it can be severed from the enterprise that controls it. But severability is not a necessary condition for identifiability. There can be several other means to identify intangible assets. According to *IAS 38*, an enterprise is able to identify an intangible asset only when :

- It could rent, sell, exchange or distribute the specific future economic benefits attributable to the asset without also disposing of future economic benefits that flow from other assets used in the same revenue earning activity; or
- It otherwise has legal rights over the economic benefits which will flow from the asset.

The identification of intangible assets is not an easy task. In most cases it becomes difficult to solve the identification problems on an objective basis. Judgments and estimates are necessary in order to determine the point at which an intangible resource becomes an intangible asset for accounting purposes.

It has been noted earlier that control is an important element of the definition of an asset. The control issue takes on an extra dimension when it comes to the question of recognition and measurement of intangible assets. If an enterprise has insufficient control over the future economic benefits arising from an intangible asset, it cannot include that item in its balance sheet.

Intangible assets are long-term capital assets. They generate benefits by their use in the business rather than by being sold in the normal course of operations. Current assets may include items that are without physical substance (eg, prepayments) but those items would not be classified as intangible assets. The definition provided by the UK ASB in its *FRS 10* (ASB, 1997) appears to be quite specific on this point. According to *FRS 10*, intangible assets are non-financial fixed assets that do not have physical substance but are identifiable and are controlled by the entity through custody or legal rights. By identifiable assets it means the assets that can be disposed of separately without disposing of a business of the entity. This *separate disposability* requirement is a very stringent requirement whose origin can be traced to the UK company legislation. Under this requirement, goodwill is not an intangible asset because it cannot be sold without forcing the entity to get out of one or more of its business segments. *FRS 10* admits that goodwill is not in itself an asset but it rationalizes the inclusion of purchased goodwill

amongst the assets of the reporting enterprise by saying that it is part of a larger asset, the investment, for which management remains accountable. But the argument seems not to be a convincing one. If an item is not in itself an asset, it cannot be put on the balance sheet.

The Concept of *Knowledge Assets*

Knowledge assets are a subset of intangible assets. Boisot (1998, p. 3) describes knowledge assets as "stocks of knowledge from which services are expected to flow for a period of time that may be hard to specify in advance". Knowledge assets derive their value not from any physical or material substance but from the knowledge and intellect contained in them. Some knowledge assets may have physical elements in them (eg, a prototype and a compact disk) but those physical components are insubstantial and do not represent their real essence; they are secondary to the knowledge they contain. Knowledge assets are grounded in the experience and expertise of individuals. To succeed in the information age-economy businesses need to be knowledge driven. Owning knowledge assets is not sufficient; much depends on how effectively and efficiently those assets are used in business operations. Businesses must have the dynamic capability of utilizing knowledge in the solution of their problems and in capturing opportunities as they emerge. Teece (2000, p. 29) explains the importance of knowledge assets in the new economy thus :

The essence of the firm in the new economy is its ability to create, transfer, assemble, integrate, protect and exploit knowledge assets. Knowledge assets underpin competences, and competences in turn underpin the firm's product and service offerings to the market. The firm's capacity to sense and seize opportunities to reconfigure its assets, to select appropriate organization forms, and to allocate resources astutely and price strategically all constitute its dynamic capabilities.

Of foremost importance in the construction of knowledge assets is the creation of new knowledge. Creating new knowledge is a highly critical function. Organizations create knowledge in several different ways. They include systematic problem-solving, utilization of past experiences, making experimentation, and learning from others. Knowledge assets come into being when knowledge is actually commercialized. These assets derive their economic value from being successfully applied in business operations. The growing use of knowledge assets in businesses has had the effect of displacing the dependency on traditional tangible fixed assets as a means for

commercial success. One of the reasons why knowledge assets have become a great source of competitive advantage in many businesses is that these assets are non-tradable. Assets that are readily tradable in competitive markets do not normally provide a source of creating competitive advantage at the enterprise level.

Knowledge assets are often used synonymously with intellectual assets, intellectual capital, or intellectual property. Intellectual assets are the outcome of the application of knowledge. The Society of Management Accountants of Canada (SMAC) defines intellectual assets as those knowledge-based items which the company owns and which will produce a future stream of benefits for the company (SMAC, 1998). Granstrand (1999, p. 322) describes the nature of intellectual capital thus :

Intellectual capital essentially comprises all immaterial resources that could be considered as assets, being possible to acquire, combine, transform and exploit, and to which it is possible to assign, in principle, a capitalized value. 'Intellectual' is thus used roughly synonymous with 'immaterial'.

Intellectual assets are usually divided into three categories: human assets, customer assets, and organizational (structural) assets. Human assets (or human capital) include know-how, education, work-related competencies, and entrepreneurial innovativeness. Included in customer assets are brands, customer loyalty, franchise agreements, licensing agreements, and distribution channels. Organizational assets comprise intellectual property (eg, patents, copyrights, trademarks, trade secrets) and infrastructure items (eg, management processes, financial relations information systems, and networking systems).

Knowledge assets are not easy to deal with. Although the idea of treating knowledge as an asset is not new, the recognition of knowledge assets as economic goods in their own right has just begun. But much work has still to be done at the conceptual level. Much work is still needed in order to establish a basis for conceptualizing the nature of knowledge assets and to define the dividing line between knowledge assets and the traditional assets. Knowledge is embedded not only in weightless assets but also in mechanical devices. We are still not sure as to how knowledge assets can be owned in the sense that land, buildings, equipment and other physical assets are owned. Unlike physical and financial assets, knowledge assets cannot always be managed directly on the basis of the profits they can earn. They require indirect methods to draw out their value and deliver returns. Another formidable difficulty with knowledge assets relates to the enforcement of property rights.

Since property rights of most knowledge assets are limited and fuzzy, it becomes often difficult to develop an appropriate basis for enforcing such rights.

HOW TANGIBILITY AFFECTS THE PARAMETERS OF ASSET ACCOUNTING

As has been seen, tangibility is not any essential attribute of an asset. An asset need not be material in the sense that it can be touched, weighed or counted. But although tangibility is not relevant to asset determination, it still has some important roles to play in specifying the parameters of asset accounting. Tangibility facilitates asset recognition and measurement. Tangible assets are easier to recognize and measure than intangible assets. Accountants do not feel comfortable with assets that lack body. When transactions and events do not leave any physical trail, considerable difficulty may have to be encountered in determining what should and what should not be recognized as an asset, how and when it should be recognized in the accounts and what monetary amount should be attributed to it.

Tangibility makes asset measurement easier because, for most tangible assets, there is a direct correspondence between the effort required to create them and the benefits that they produce. But intangible assets tell a different story. These assets are "non-linear with respect to the effects they produce" (Boisot, 1998, p. 3). There are many tangible assets whose values are determined by reference to their physical attributes. This is specially so for those assets whose ability to render benefits is directly associated with their physical contents. The physical attributes possessed by an asset often becomes the main determinant of its useful service life. In the conventional historical cost-based accounting, the estimation of useful service life of an asset is an important aspect of determination of periodic depreciation. Except for some well-defined assets such as patents, copyrights and franchises, the estimation of useful service lives of intangibles may appear to be a highly complex task. The lack of physical substance is one important reason why accounting standard-setting bodies have adopted a very conservative approach towards the recognition of intangible assets in the accounts. The recognition rules for intangible assets are much harder and much more demanding than those applicable to traditional financial and physical assets.

PROBLEMS WITH SELF-DEVELOPED INTANGIBLES

The accounting treatment of intangible assets is determined on the basis of whether they are acquired or internally developed. Acquired intangibles are those intangibles that are purchased from external parties at a clear acquisition price. Enterprises sometimes may acquire intangible assets such as patents, licences, copyrights, and trademarks by purchasing them from other parties. If these assets are acquired singly then their accounting recognition does not present any serious difficulty. Singly-acquired assets can also be measured easily at least at the time they are first recognized in the accounts. When an intangible asset is acquired separately from an external party at a cost, there is the presumption that it will produce future economic benefits. The asset, therefore, meets the recognition criteria. But problems arise when intangible assets are acquired as a part of business combination. Separate recognition may be difficult if the assets so acquired cannot be measured reliably. The current accounting practice requires subsuming within the purchase price attributable to goodwill all the intangibles acquired as part of the business combination when such items are not capable of being measured on a reliable basis.

An enterprise may develop intangible resources internally by its own operations. In fact, most intangible resources of enterprises are developed internally. Although purchased intangibles are recognized as assets, home grown intangibles are mostly ignored. At present, there is no well-established accounting framework for the recognition and measurement of intangible assets enterprises develop by their own operations. Meaningful comparison of accounts between entities may be thwarted if purchased and internally developed intangibles are subjected to different accounting treatments. The most important reason why home grown intangibles are not normally recognized in the accounts is the difficulty of obtaining a reliable basis of measurement. Under the conventional historical cost-based accounting, assets come into being when expenditures are capitalized. If an outlay or expenditure gives rise to an enduring benefit, it is capitalized. But when there is uncertainty as to the future benefits of an outlay, it is expensed when incurred. At the time an enterprise spends resources for creating an intangible asset, it is not sure as to the future outcome of the spending. In view of this uncertainty as to future probable benefits, the expenditure is not capitalized. For example, when an enterprise incurs expenditures on brand creations or on staffing and staff development, it cannot capitalize those

expenditures because no recognizable asset exists at the time the expenditure is made. If internally generated intangibles are to be recognized in the accounts, the cost route cannot be of much help. The alternative route is the valuation route. But there are problems with valuation.

The accounting requirements relating to recognition and measurement of internally generated intangibles vary from one jurisdiction to another. The IASC standard, *IAS 38*, permits recognition of internally developed intangibles if certain very restrictive conditions are met. The standard does, however, prohibit the recognition of certain categories of internally generated intangibles such as goodwill, brands, newspaper mastheads, publishing titles, and customer lists. Other internally developed intangibles can be recognized if they meet the specified criteria. The most important criterion for recognition of an internally developed intangible is the reliability of cost measurement. The cost of an internally generated intangible could be determined in the same way as the cost of any other internally generated asset. But there is an important exception. It is only the expenditure incurred from the date when the asset first meets the recognition criteria which qualifies for capitalization. Expenditure previously recognized as an expense cannot be included in the cost of the asset. The conditions are indeed so rigid that very few internally developed intangibles will qualify for recognition in the accounts.

In the US, the FASB has very recently changed its accounting requirements relating to intangibles. The new accounting standards, *SFAS No. 142* (FASB, 2001), which supersedes *APB Opinion No. 17*, has brought about radical changes in the accounting treatment of goodwill and other intangible assets. But the standard has not changed the requirements relating to the recognition and measurement of internally developed intangible assets. According to *APB Opinion No. 17* (AICPA, 1970, paragraph 24), costs of developing, maintaining, or restoring intangible assets which are not specifically identifiable, have indeterminate lives, or are inherent in a continuing business and related to the entity as a whole should be expensed when incurred. These are very stringent conditions and they can hardly be met in practice. Accordingly, it is not easy for US companies to capitalize internally developed intangible assets.

The UK accounting requirements relating to internally generated intangibles appear to be different to some extent from those referred to above. According to *FRS 10* (ASB, 1997, paragraph 14), internally developed identifiable intangibles may be capitalized only if it has a readily ascertainable market value. Under the International Account-

ing Standard, internally developed intangible assets can be capitalized as long as costs can be measured reliably; a readily ascertainable market value is not required. *FRS 10* defines readily ascertainable market value as a value that is established by reference to a market where : (1) the asset belongs to a homogenous population of assets that are equivalent in all material respects; and (2) an active market, evidenced by frequent transactions, exist for that population of assets (paragraph 2). There is, however, a choice. An enterprise may decide not to capitalize an intangible it has developed itself. In the case of a purchased intangible, no such choice is allowed; all purchased intangibles have to be capitalized. But although the standard permits capitalization of internally developed intangibles, in real practice, however, most of these assets will go unrecognized. Since uniqueness is the main characteristic of most intangible assets, it will be difficult to satisfy the requirement of *having an active market for similar assets*.

THE RECORDING AND REPORTING OF INTANGIBLES IN PRACTICE

As has been mentioned earlier, the current accounting model is inadequate to capture most of the intangibles that drive enterprise value in the information-age economy. It is true that many significant new orientations have taken place in recent years in the financial reporting requirements relating to intangibles, but gaps persist. In this section an endeavour is made to provide a brief analysis of the nature of certain specific types of intangibles and the way they are currently being accounted for. The analysis begins with goodwill.

Goodwill

Goodwill is a well-known intangible asset. In fact, it is the most widely cited example of an intangible asset in accounting. But it is at the same time the most misunderstood asset in accounting. The key problem with goodwill is that it is inseparable from the business which possesses it. Goodwill attaches only to the business as a whole and it is difficult to attribute it to separately identifiable objects and factors. Although much has been said and many words written on the subject, accountants are still not sure as to its real nature. Many accounting writers (eg, Leake, 1914; Yang, 1927; Canning, 1929; Nelson, 1953; Gynther, 1969; Weinwurn, 1971; Lee, 1971; Miller, 1973; Tearney, 1973) have tried their hands at defining goodwill and at explaining its nature but no constitutive concept has emerged. Goodwill continues to be a nebulous concept in

accounting. Following the UFO analogy, one accounting author (Cohen, 1990, p. 28) has described it as an "unidentified accounting object". According to Griffiths (1986, p. 78), goodwill is bit like wind; one cannot see it or hold it but one knows that it is there. Tollington (1997, p. 43) considers goodwill to be a generic term, which embraces many fickle attributes such as business reputation and strategic location.

Traditionally, goodwill has been viewed in terms of those elements of a business which cause customers to return to that business. Yang (1927, p. 29), described goodwill as every thing that might contribute to the advantage an existing business possessed over a newly started one. The recent tendency, however, is to equate goodwill with all the favourable conditions that enable an entity to earn superior profits. The factors that create these favourable conditions are different in different businesses. Included among these factors are favourable locations, superior management teams, effective advertising, good labour relations, favourable legislation, good credit rating, monopoly power, favourable tax conditions, secret manufacturing processes, unique market position and assurance of supply. The factors that constitute goodwill are difficult to identify and value individually.

According to some accounting authors, goodwill represents the business phenomenon of synergism. It is a special *going value* valuation account representing the excess of the combined assets of the entity over the sum of their individual values (Bedford, 1970, p. 19-2). If this view is accepted then goodwill cannot become an asset in its own right. Synergism, in plain words, means that the whole is greater than the sum of the parts. It results from interaction of components. Ma and Hopkins (1988, p. 79) describe the synergic effect of combining assets in a business thus :

The use of an asset in combination with other assets is often assumed to lead to an interaction affecting favourably the productivity of other assets as well as its own productivity. This is so called synergy from asset interaction, which results in superior earnings. Other interactions, for example, between the sub-system of a firm or between a firm and its environment, also generate synergistic benefits.

There are some others who are inclined to believe that goodwill is nothing but an overall measure of undervalued and unrecorded assets. Assets whose current market values are greater than their balance sheet carrying amounts are regarded as undervalued assets. Under valuation may occur due to a variety of reasons. Unrecorded assets, on the other hand, are assets that are not recognized in the balance sheet.

The *master valuation account* notion of goodwill provides still another approach to conceptualizing goodwill. The notion combines both the going value concept and the concept of undervalued assets and unrecorded assets. According to this concept, goodwill is a common joint value which cannot be allocated to individual assets in a meaningful manner. The master valuation account concept is equivalent to the economist's concept of subjective goodwill. The value of an entity, according to the economist's view, is the present value of an expected future stream of net cash flows. All the assets of the entity that contribute to its future cash flows have value to it. If the expectation of future cash flows changes due to some happenings, the assets of the entity assume new value. Goodwill represents that portion of value gain that cannot be associated with particular assets. In this sense, it simply becomes a straight plug.

The *excess profit* view of goodwill is the most popular amongst the goodwill views employed in practice. According to this view, goodwill represents an above normal earnings capacity (Catlett and Olson, 1968). The term *excess profit* denotes the profit in excess of that which is required for a reasonable return on all of the assets of the enterprise other than goodwill. The value of goodwill is the present value of the anticipated excess profit discounted over a certain number of periods. In this sense, goodwill is nothing but an earning power. It is tied to the level of profits over and above the minimum return. Truly speaking, the excess profit view is an approach to the measurement of goodwill; it tells little about the asset in terms of its nature.

Treatment of Purchased Goodwill

Goodwill exists in all successful businesses. But it is generally recognized in the accounts as an asset if it is paid for as a part of a business combination. Since goodwill is an inseparable asset, it cannot be purchased singly. Internally developed goodwill is seldom reported on the balance sheet as an asset. Expenditures towards creating, maintaining and restoring such goodwill are expensed when incurred. In many countries, valuing and reporting internally developed goodwill is specifically banned. The goodwill that is reported in the financial statements of companies is an acquired goodwill. When goodwill is acquired from an external party, there is the confirmation of its existence. Since purchase embodies an arm's length transaction, the value of goodwill is also readily determinable. For a business that does not change hands, there is no transaction or event to confirm the existence of its goodwill. This is the main

argument accountants generally put forward for not recognizing internally developed goodwill. Purchased goodwill is measured as the difference between the total purchase price paid for an acquired business and the fair value of its identifiable assets minus liabilities. When the former exceeds the latter, there is positive purchased goodwill. Negative purchased goodwill (or *badwill*) arises if acquisition price is less than the fair value of the net assets acquired. However, the situations that give rise to negative goodwill are encountered only rarely. Purchased goodwill includes goodwill arising out of the inclusion of a subsidiary in the consolidated financial statements.

The payment that an enterprise makes towards purchased goodwill is intended to be a payment for the superior (above-normal) earning capacity of the acquired business. But the amount that is attributed to goodwill is not computed in a direct way. Instead, it is computed based on an indirect method. It is called the residual method. Under this method, the price paid for acquiring an entity is first allocated to identifiable assets (including intangibles) and liabilities in accordance with their fair market values. If this process results in full exhaustion of the purchase price, goodwill does not arise. But if there is an unallocated amount, this residual is then denoted as goodwill. Thus, goodwill is recognized by default. To view goodwill as a residual amount simply proves the fact that accountants and businesspeople know little about it in terms of its nature. According to Tollington (1994), to view goodwill as a residual is to view it as something to 'tidy up' from a bookkeeping viewpoint rather than to address its complex nature and valuation.

The term *identifiable assets and liabilities* in the context of goodwill accounting means not only those assets and liabilities that have been recognized in the books of the acquiree but also those unrecognized assets and liabilities that are separately identifiable.

Goodwill (purchased) accounting involves two stages : (1) initial recognition and measurement and (2) subsequent accounting and reporting. The initial recognition and measurement of purchased goodwill is not a much troublesome issue. If the fair values of the assets acquired and liabilities assumed can be determined on an objective basis, the remaining task can be accomplished fairly easily. But the next phase of goodwill accounting is a very complex one. It involves the determination of how purchased goodwill should be accounted for subsequent to its acquisition. The key problem that is encountered in this phase relates to the difficulty of keeping track

of the goodwill subsequent to the acquisition. After a new business is acquired it is soon integrated with the existing operations of the acquirer. As a result, it becomes difficult to isolate the effect of the acquired goodwill. Petrone (2001, p. 101) observes :

Companies generally integrate acquired businesses with other parts of their existing operations, and the synergies that result from that integration permeate many parts of the company. A related obstacle is the fact that the benefits of goodwill are realised when the net assets of the business work together – goodwill does not produce its own cash flows and hence cannot be measured in isolation.

Practices vary amongst countries as to accounting and reporting of purchased goodwill subsequent to its acquisition. They may be summarized as follows⁹ :

1. Retention as a permanent asset at the initially measured amount;
2. Immediate write off of the full amount against equity (accumulated profits / reserves);
3. Amortization of the initially recognized amount over useful economic life;
4. Amortization of the initially recognized amount over a specified period of time;
5. Subjecting to periodic impairment review.

The underlying rationale for keeping goodwill as a permanent asset is that, in a successful business, its value does not diminish. Proponents of the practice of retaining goodwill as a permanent asset argue that the asset has an infinite life that can be maintained or even enhanced over time. Accordingly, no amortization or immediate write off is necessary. Businesses maintain their goodwill by spending monies on advertisement, employee training and development, product or service quality improvement, and on similar other activities. Since these expenditures are expensed when incurred, there is no need, as the argument goes, to write off or amortize purchased goodwill.

Proponents of immediate write off argue that purchased goodwill should be immediately written off against shareholders' equity for the principal reason that it is not separately realizable. Another argument in favour of immediate write off is that the practice is consistent with the principle of maintaining parity in accounting treatments between self-developed and purchased goodwill. If self-developed goodwill is not to be recognized in the financial statements then, to be consistent, purchased goodwill should also be kept off the financial statements. The AICPA *Accounting Research Study No.10* (Catlett

and Olson, 1968) argues in favour of instant elimination of purchased goodwill for the reason that it promotes consistency in accounting treatments. The immediate write off had been an allowed accounting alternative in the UK prior to the promulgation of *FRS 10*. Currently, the practice of writing off purchased goodwill against retained profits is permitted in some Continental European countries (eg, Denmark, Germany, the Netherlands and Switzerland).

The immediate elimination of purchased goodwill may give rise to an anomaly if the amount paid for goodwill on the acquisition of a business is abnormally high in relation to other assets acquired. Such a situation may arise when the business being acquired is a high-tech or service organization whose key assets are predominantly intangibles. The instant elimination of purchased goodwill may even be a technical impossibility if the acquirer does not have sufficient accumulated profits to absorb the full amount of purchased goodwill. Even if full absorption is technically possible, many would still object to the policy of immediate write-off on the ground that such an action might result in the destruction of the economic reality underlying the acquisition.

Systematic amortization is considered by many to be a logical approach to dealing with purchased goodwill. In fact, the prevailing accounting rules in many countries require purchased goodwill to be systematically amortized to the profit and loss account over its presumed benefit periods. Since it is not easy to determine the useful economic life of purchased goodwill, accounting rules provide for a maximum time limit for this purpose. For example, the UK *FRS 10* requires that purchased goodwill should be capitalized and amortized over its useful life subject to a refutable assumption that the life does not exceed 20 years. The revised *IAS 22* (IASB, 1998f) requires goodwill amortization with an amortization period between 5 and 20 years. Those who require that purchased goodwill should be amortized are prompted by the belief that goodwill is a type of wasting asset. Systematic amortization is consistent with the matching principle because it seeks to ensure that the expenditure is matched against the benefits generated by that expenditure. Proponents of the approach argue that purchased goodwill has a finite life and will erode over time as new conditions emerge. Another argument put forward in favour of systematic amortization is that if purchased goodwill is not amortized through the profit and loss account, it will ultimately result in the capitalization of internally generated goodwill. This is so because, as the reasoning goes, any goodwill that is purchased erodes and is gradually replaced by internally generated goodwill.



The amortization of purchased goodwill is not consistent with the balance sheet model. The practice that would be consistent with this model is one of capitalization and periodic revaluation. In the US, the FASB has eliminated the transaction-based approach to accounting for goodwill under *APB Opinion 17*. The new rule (*SFAS No. 142*) does not presume that goodwill is a wasting asset. Under this rule, purchased goodwill shall not be amortized but shall be tested for impairment. In the old APB rule, which had been in force for more than 30 years, the requirement was to amortize goodwill to profit over a period not greater than 40 years. The amount amortized during any given period is simply an allocation which may or may not reflect the actual decline in goodwill value during that period. The practice of having to allocate goodwill over an arbitrary period has been criticized for the reason that it does not faithfully represent the economic value of goodwill and its impact on profit in the financial statements. Under *SFAS No. 142*, companies are required to test goodwill for impairment at the reporting unit level. A reporting unit, it may be mentioned here, is either an operating segment or a component of an operating segment that constitutes a business for which discrete financial information is available and whose operating results are regularly reviewed by segment management. The impairment test is to be performed at least annually using a two-step process that begins with an estimation of the fair value of the reporting unit. The first step provides a screen for potential impairment, and the second step involves measuring the amount of impairment, if any. If the reporting unit's fair value is less than its carrying amount, the impairment test involves a comparison of the implied fair value of goodwill to its carrying amount. Goodwill's implied fair value shall be calculated based on the same procedure as is used to calculate goodwill in a business combination.

In the US, the past practice has been to include in the amounts of goodwill identifiable intangible assets that had finite useful lives. But that practice is not permissible under the new FASB rule. The new rule is designed to account for *true* goodwill. An intangible asset acquired in a business combination shall be recognized separately from goodwill if that asset arises from contractual or other legal rights or that is capable of being sold or separated from an enterprise. Such an asset is not a part of goodwill. It is only those intangible assets similar to goodwill that can be subsumed within the acquired goodwill. The new FASB rule has the potential of slimming down the amount attributable to purchased goodwill. As more separable assets are identified, the less will be the amount for goodwill that needs to be dealt with.

SFAS No. 142 also addresses how other intangible assets that an enterprise acquires, whether individually, with a group of other assets, or in a business combination, should be accounted for after they have been initially recognized in the financial statements. According to the standard, a recognized intangible asset should be amortized over its useful life and reviewed for impairment. But if the asset has an indefinite useful life, it should not be amortized until its life is determined to be no longer indefinite. A recognized intangible asset that is not amortized should be tested for impairment annually and on an interim basis if an event or circumstance occurs between annual tests indicating that the asset might be impaired.

SFAS No. 142 has significantly increased the disclosure requirements relating to goodwill and other intangible assets in the years subsequent to their acquisition. Required disclosures include information about changes in carrying amount of goodwill from period to period, the carrying amount of intangible assets by major intangible asset class for those assets subject to amortization and those assets not subject to amortization, and the estimated intangible asset amortization expense for the next five years.

The FASB admits that, because goodwill and some intangible assets will no longer be amortized, the reported amounts of goodwill and intangible assets will not decrease at the same time and in the same manner as under *APB Opinion No. 17*. It also admits that, because impairment losses are likely to occur irregularly and in varying amounts, there may be more volatility in reported profit than under previous standard. Earnings volatility is the harsh reality of the modern business world and financial reporting should reflect that.

In the UK, amortization is the basic thrust of *FRS 10*. Impairment test is required, but that requirement exists in order to ensure that carrying value does not exceed recoverable amount. The standard, however, recognizes that certain intangible assets, not possessing a physical form which must wither with time, can have an indefinite life. Where goodwill and intangible assets are regarded as having indefinite useful economic lives, they should not be amortized (paragraph 17). *FRS 10* allows certain intangible assets (not goodwill) to be revalued to market value. According to the standard, where one or more capitalized intangible assets of the same class have a readily ascertainable market value, they can be marked to market, with further revaluations taking place sufficiently often to ensure that the carrying value does not differ materially from the market value at the balance sheet date.

The IASC does not subscribe to the view that goodwill and intangible assets can have an indefinite life and hence requires amortization of such assets in all circumstances. According to *IAS 22*, the useful life of goodwill is "always finite" and as such it should always be amortized. *IAS 38* also takes a similar position with regard to other intangible assets. The IASC believes that impairment test is not a substitute for a systematic allocation of cost. It should, however, be mentioned in this context that the newly-restructured International Accounting Standards Board (IASB) has a project on its agenda to consider the elimination of amortization of goodwill and other intangible assets.

Brands

Brands are regarded as a component of customer capital. They are important because they perform a very crucial role in business value creation. The importance of brands lies in the fact they have the ability to communicate meaning or messages. Brands are a carefully constructed package of information about special attributes of products or services produced by enterprises. According to Zyman and Miller (2000, p. 58), the brand is "like a CD that holds for consumers all the meaning of everything the company, the products, and the customer relationship amount to and stand for". (Knowles (2001, p. 21) describes the role of brands in business thus :

Brands communicate a rich set of messages and allow us to feel that we can relate to the underlying offer, be it a product (such as Coca-Cola), service (such as McKinsey) or even a company (such as GE). The effect of the brand is to give the underlying asset an appeal over and above what can be explained by the functional benefit it offers.

Brands are valuable business assets. They help enhance the value of products and services. Effective brand building enables enterprises to charge more for what they produce and sell in the market. For many corporate enterprises (eg, Coca-Cola, Microsoft, IBM and Nokia) brands now represent the highest proportion of business value. A large percentage of the market capitalization of these enterprises is attributable to the value of their brands.

Much debate during recent years has raged over the issue of whether brands can sit on the balance sheet. Brands meet the definition of assets because they are capable of producing economic benefits, but there are some problems with their recognition in the accounts. There are also problems associated with the valuation of brands. Some say that brands are indistinguishable from the factors

that give rise to goodwill and as such they are incapable of being separately identified as assets in their own right. They further maintain it that though brands may be of considerable value to the business, their benefits are obtained only in association with other assets. According to these people, separate recognition of brands in the accounts is not justified and necessary. But there are others who hold an opposite view. They argue that brands are separately identifiable assets with independent status and hence they should be put on the balance sheet. According to Stobart (1989, p. 29), brands and goodwill are separable issues and should be treated as such. He observes :

A brand is a separately identifiable asset with independent legal status capable of conferring considerable benefit on its owner. A brand can be transferred between brand owners by simple transfer of the trademark certificate that governs the brand's legal status.

The brand accounting controversy has resulted in differing brand accounting practices globally. In some countries, brands can be put on the balance sheet if they are externally acquired. In some other countries, both externally acquired and internally generated brands can be put on the balance sheet. There are still some other countries that do not allow brands, whether purchased or internally developed, to be recognized in the balance sheet. Practices also differ among countries as to the treatment of brand values subsequent to their initial recognition in the accounts.

Put simply, a brand is "the trademarked name of a particular product" (Sutton, 2000, p. 223). Broadly stated, a brand is "a product or group of products or a service, with a particular name, that usually forms part of easily recognizable design on packaging or advertising or advertising material"¹⁰. Brands reflect the distinguishing characteristics of a product or service that builds customer loyalty and differentiates it from competitors. Branding is not just a case of labelling a product or service. It is much more than that. Brand names, which typically have the legal status of trademarks, are the external manifestation of a company's strategy and culture. The most important aspect in the concept of brand is differentiation. The brand is there to differentiate between two products or services. Brands are sometimes attached to the names of companies and become their distinguishing logos. Branding companies, products, and services is now a common business practice throughout the world. Building brands is now seen as a very valuable weapon in the corporate marketing arms race in the buyer-centric business and marketing environment. New brands are emerging at a faster rate

than ever before. Various products are recognized instantly from their brand names. Examples include Cadbury's chocolate and Kellogg's cornflakes. Some brand names have even become substitutes for the product name. Branding has been most successful particularly in consumer goods and food products. Many brand names are well-known globally. They include Coca-Cola, Microsoft, IBM, Disney, Marlborough, Gillette, Nescafe, Intel, Kodak, McDonald's, Sony, and Baccardi. Most of these well-known brand names worth billions of dollars. It is learnt from a recent study that Coke has a brand value of 83.9 billion US dollars¹¹. The same study estimates Microsoft's brand value to be 56.7 billion US dollars. Brand names have value because they create value for their owners. Brands can create value for their owners by (a) securing higher prices, (b) lowering marketing costs, (c) creating leverage with distributors and retailers, (d) stretching geographical markets, and (e) stabilizing long-term command in the market. In recent years there have developed several agencies that have specialized knowledge and skills in valuing brands. The British Interbrand provides an example of such a specialized brand valuation agency. Interbrand has conducted many brand valuation assignments for domestic as well as multinational companies.

The practice of differentiating between acquired brands and purchased goodwill first developed in the UK in the 1980s. Companies started to adopt the differentiation practice so that they could capitalize acquired brands while still eliminating the reduced balance of goodwill against accumulated profits. The then UK accounting rules required purchased goodwill to be written off against reserves immediately upon acquisition. This treatment gave rise to problems in cases where the amount attributable to goodwill exceeded the amount of accumulated reserves. To overcome the problems many companies in the UK began separating brands from goodwill and reporting them as assets in the balance sheet at current market value. A number of companies in the country even started reporting internally generated brands as assets in the balance based on the EU 4th Directive, which permitted intangibles to be included in the balance sheet at their current cost. Accounting standard-setters did not like these brand accounting practices and issued accounting releases to prohibit the recognition of internally developed brands and to discourage separating purchased goodwill from brands in business acquisitions. The latest accounting rule in this country, as set forth in FRS 10, allows companies to incorporate acquired brand names into their balance sheets and amortize them

according to their presumed useful life. But the standard is silent about home grown brands.

In Australia, companies use different methods of accounting for their brand names. Many companies in this country follow the practice of separating acquired brand names from goodwill and including them in the balance sheet. The practice of recognizing internally generated brand names as assets is also not uncommon among Australian companies. Several Australian companies adopt this practice and some of them even do not amortize them arguing that they do not have finite lives. Accounting standard setters are now thinking of promoting measures for standardizing brand accounting practices.

The United States, which is the home country of the largest number of brand-rich companies in the world, has a very conservative rule relating to recognition of brand assets in the balance sheet. The current US accounting practice does not allow the recognition of internally developed brands in the balance sheet. Under current US GAAP, all research and development expenditures as well as all expenditures on advertising that eventually result in brand recognition have to be expensed when incurred. Accordingly, no assets are recognized for the future benefits of which such expenditures are made. US companies can recognize externally acquired brands if they can be separately recognized.

The International Accounting Standard, *IAS 38*, specifically precludes the recognition of internally developed brands (paragraph 51). As has been stated earlier, the same requirement is applicable to many other internally developed intangibles. The standard takes the view that expenditure on an internally generated brand cannot be distinguished from the cost of developing the business as a whole. Therefore, this item is not recognized as an asset. If the brand is acquired singly, it can be recognized as an asset in the balance sheet. According to *IAS 22*, if a brand is acquired in a business combination that is an acquisition, it can be recorded in the balance sheet if it meets the recognition criteria. If the recognition criteria are not met, the item is included in goodwill.

The accounting treatment of brand names is a highly problematic subject. Accounting standard-setting bodies are grappling with the problem, but there is a long way to go. The *acquired/internally developed* debate is yet to be brought to a meaningful conclusion. At present, there are differences among jurisdictions as to the requirements relating to the recognition and measurement of brand assets. A common approach to the solution of brand accounting

problems is necessary. The task of the accounting standard setters is getting complicated day by day due to the increasing complexity of the concept of brand. One of the striking features of the new complexity of the brand concept is the convergence of the product brand model and the corporate brand model. Companies which in the past have been the epitome of product or service branding (eg, Nestle, Procter and Gamble, Unilever) are now recognizing the virtues of having an umbrella or parent branding. Accordingly, they are projecting their names as a supra or master brand. On the other hand, companies which have been in the practice of building trust on one name (eg, Sony, Toyota) have started introducing the concept of segmentation of brand portfolios. Some further complexity in the concept of brand is arising due to the introduction of the practice of co-branding and co-parenting. More concerted efforts are necessary to meet the challenges being brought about by the increasing complexity in the practice of branding.

Research and Development Costs

According to functional classification of intangible assets, research and development (R&D) costs are an aspect of organizational capital. R&D expenditures are incurred for the purpose of developing new products or services, improving existing ones, or reducing future operating expenses. The activity constituting R&D is a very important economic activity performed by many enterprises in order to equip them to respond effectively to changes in technologies and markets. It is a key success factor for most enterprises in the fast growing hi-tech sector. Enterprises in the pharmaceutical industry spend huge amounts on R&D and these expenditures often constitute sizeable portions of their annual revenues. Expenditures on R&D are usually seen as a kind of capital investment in that they are aimed at creating value for the enterprise in future periods¹². In the context of accounting, the key issue is whether to capitalize or expense R&D expenditures when incurred. Under the matching-driven system, R&D expenditures are capitalized and amortized over the period benefited. But if the cause and effect relationship is unclear or highly uncertain, the expenditures are expensed as incurred. The balance sheet approach requires capitalization of R&D outlays only when they give rise to recognizable assets. Accounting standards have been formulated in many countries specifying requirements as to how R&D outlays should be dealt with. But there is considerable diversity in the way the standard setters in different jurisdictions have tried to address the issue.

Accounting rules in many countries requires the making of a distinction between *research* and *development*. They equate research with the activity that is aimed at developing new knowledge or modifying existing knowledge and they view development as the post-research activity. Development activity begins where research activity ends. The activity described as development is the function that is concerned with bringing research findings to a commercially useful and marketable stage. It involves the use of research to produce new or improved products or services, install new production processes or systems, or to improve substantially those already produced or installed. The UK *SSAP 13* (ASC, 1989) identifies two types of research: pure research, which is experimental work directed primarily to the advancement of knowledge, and applied research, which is work directed primarily towards exploiting pure research, other than work treated as development. According to the standard, all expenditures (other than those on fixed assets) incurred on pure and applied research should be written off in the year of expenditures. The standard permits capitalization of development expenditures subject to five conditions : (1) there is a clearly defined project; (2) the related expenditures are separately identifiable; (3) the project's outcome has been assessed with reasonable certainty about its technical feasibility and its commercial viability; (4) there is a reasonable expectation that related sales will exceed the amount of the capitalized costs, any future development costs and related production, selling and administrative costs; and (5) there are adequate resources to enable the project to be completed and to provide any consequential increases in working capital. If these conditions are not met, development expenditures are to be expensed when incurred. When the capitalization route is followed, the capitalized amount has to be reviewed each period and expensed immediately if it no longer meets the asset recognition criteria. The standard specifically excludes market research from R&D expenditures. There is an anomaly in this requirement in that the market research is an integral part of the decision process in product development projects.

The US rule, as stated in *SFAS No. 2* (FASB, 1974), requires all R&D expenditures to be charged to expense as incurred, except when R&D is conducted for others under a contractual agreement. The primary justification offered by the FASB for expensing R&D expenditures is the level of uncertainty associated with the benefits. The whole approach of *SFAS No. 2* is one of conservatism. It implicitly assumes that the expected value of R&D is zero. But the

assumption is not based on reality. If the expected value of R&D were zero, enterprises would not have engaged in this activity. Those that engage in R&D activity do so in the expectations of benefiting future periods. Many have criticized the FASB for being too conservative in its approach towards accounting for R&D costs. They argue that the FASB rules result in a seriously understated balance sheet. Research reveals that the market treats R&D expenditures as possessing greater value than many traditional long-lived assets. Immediate expensing may be an easy solution in the face of uncertainty, but that is not consistent with economic reality. Most enterprises look upon R&D as a strategic asset. This being the fact, then there must be a reflection of that on the balance sheet.

Although the FASB is against capitalization of R&D costs, it takes a different stand with regard to computer software costs. In its accounting standard *SFAS No.86* the FASB permits capitalization of expenditures for computer software to be sold, leased, or otherwise marketed as a separate product or process if technological feasibility can be demonstrated. Until the establishment of the point of technological feasibility, all expenditures are expensed as incurred. Software development expenditures incurred after technological feasibility, and until the product is ready for general sale to customers, qualify for recognition as an intangible asset. Amortization of this asset for a particular year is proportional to project revenues generated during that year relative to totals expected project revenue.

The IASC rules relating to R&D are currently contained in *IAS 38*. These rules were previously the subject of *IAS 9*. The new IASC rules, like those of the UK and the US, revolve around the two central tenets of the matching-driven system of accounting: accruals and prudence. *IAS 38* sees expenditures on research as continuing costs of running the business. Accordingly, it requires expensing of all research expenditures in the year in which they are incurred. The standard permits capitalization of development expenditures if, and only if, they meet certain criteria. These criteria are similar in many respects to those contained in the UK *SSAP 13*. According to the standard, capitalized development expenditures should be matched against future benefits arising from the developed product in a sensible and consistent manner.

Enterprises in extractive industries (coal, metals, oil, and natural gas) have some accounting problems with the exploration and development costs they incur in the search for new deposits of natural resources. These costs are similar to R&D costs. The

accounting problems relate to whether exploration and development costs should be expensed as incurred or capitalized and amortized. There are two major alternative approaches to dealing with these costs: full-cost accounting and successful-efforts accounting. In full-cost accounting, all costs incurred in the search for new deposits of natural resources are, regardless of whether they result in successful or unsuccessful projects, capitalized and amortized through the profit and loss account in the period revenue is generated. Under the other alternative, all costs which of themselves do not result in the discovery of natural resource are expensed as incurred. It is only the costs identifiable with successful projects that are capitalized and amortized. The two alternative approaches can yield significantly different results.

Both the full-cost and the successful-efforts methods have deficiencies. They are incapable of reflecting the economic reality underlying the exploration and development activity. It is argued from some quarters that *reserve recognition accounting* would be a better approach to the solution of the accounting problems of enterprises in extractive industries. This approach is based on the notion of computing the net present value of an enterprise's proven reserves. But the approach has not yet found favour with the accounting standard-setting bodies.

Human Capital

In the information age-economy, the most important form of capital is human capital. An enterprise's human capital is the skills, capabilities, and expertise of its workforce or employees. Human capital is one of the key intangible assets new economy enterprises leverage in order to gain and sustain competitive advantage. Enterprises in the service sector are mostly dependent on their human capital for attaining success. Service sector enterprises leverage the knowledge and talent of their workforce in order to achieve strategic objectives. But this valuable resource is not recorded in the accounts. Human capital does not find any place in the balance sheet because it does not meet the definition of an accounting asset. An enterprise does not own its employees. Nor does it have any effective means of exercising control over them. The expenditure that is incurred by the enterprise for the purpose of professional development and training of its employees is written off immediately as expense. This is so because the enterprise has no control over the benefits from this expenditure. Employees are at liberty to leave the enterprise and take their new knowledge and expertise with them. In some cases the enterprise secures legal right

to employee services (eg, services of professional sportspersons, singers and performers) as a result of spending resources. The costs that are incurred in the acquisition of service rights may be capitalized and treated as intangible assets. Some corporate enterprises in the UK that own professional sports clubs adopt this practice.

The above analysis of current accounting practice with regard to the recognition and measurement of intangible assets reveals that things are far from satisfactory. With the existing rules accountants are unable to count much of what really counts in the information-age economy. The existing accounting rules are grossly inadequate for the task of recognizing and reporting most of the intangible assets enterprises are banking on in the new economy. These assets go unrecorded and unreported.

CONCLUSION

Intangibles have always been a big headache for accountants and accounting regulatory agencies. They have never felt comfortable with the idea of having to value intangibles for the purpose of putting them on the balance sheet. Users of financial statements have also frowned on the balance sheets that incorporated huge intangibles. The elements of uneasiness still persist. But there is growing realization that something needs to be done immediately in order to improve communication about intangibles to users of financial statements. The existing accounting system leaves out a lot of information that is useful and relevant. If corporate financial reporting is to deliver the right story, it must take more account of the intangibles that are the basic drivers of business success in the new economy. Inadequate or incomplete communication of intangibles may lead to share price volatility. Accounting standard-setting bodies appear to be deeply concerned about the growing gap between the balance sheet value and the market value of enterprises. It seems that they have realized that old answers do not fit new realities. However, they are not sure as to how they will come up with a satisfactory solution. Fear is holding them up; they are afraid that any scheme for valuing something that is invisible would inevitably involve a high degree of subjectivity and judgements. The fear that a greater degree of permissiveness might open the flood gates to manipulative accounting also looms large in their thinking. This is why they have elected to move forward cautiously. To begin with, they want to proceed via the disclosure route. The US FASB is now actively considering introducing compulsory disclosures in

published company accounts about the value of intangibles. In the UK, the ASB has published its latest proposals for an updated *Operating and Financial Review (OFR)* for company directors to include in a company's annual report. Included in the proposals is a new recommendation that directors discuss the strengths and resources of a business, such as its brand equity, market dominance or product research. The UK government is keen that companies should take more account of their intangible assets. It is now seriously considering the proposal of making the OFR compulsory.

In recent years there have developed several models for measuring intangible assets outside the formal double-entry book-keeping framework. These include the *Balanced Scorecard* of Kaplan and Norton (1992, 1996); the *Celemi Monitor* developed by Celemi, a Swedish developer of learning tools¹³; *Intangible Assets Monitor* of Sveibi (1988 and 1997); and the *Skandia Value Scheme* developed by Skandia AFS, a Swedish financial services company. Although these models are aimed at creating a management tool, the information generated by them can also be used in the context of external financial reporting. The Skandia model has already become much popular. Many companies have found the model appealing because it provides a basis for understanding how value can be created by getting a grip on the intangibles. But the information generated by this model cannot be incorporated into the basic financial statements; it can at best serve as a supplement to those statements.

The disclosure route has obvious merits. Disclosures add to the information content of financial reporting. But they can never be a permanent solution. Disclosures are not a substitute for recognition and measurement. What we now need is a comprehensive accounting model that can recognize and report intangible assets in a consistent and coherent manner. This is possible only when the nature, characteristics and attributes of these assets are fully known. There are many new economy intangibles about which virtually nothing is known. These intangibles are surrounded by vagueness and ambiguities. The management information systems currently in use provide only a fragmented and incomplete picture of the enterprise's intangible resource base. The individual items comprising the enterprise's intangible resources have to be identified and understood first before any endeavour is made to subject them to quantification exercises. One thing is, however, almost certain: the transaction cost-based accounting model is incapable of solving the problems of recognition and measurement of the new economy

business intangibles. If the boundary of the company balance sheet is to be extended beyond tangible assets, the focus should be shifted from cost-based accounting to value-based accounting. The problems of recognition and measurement of intangible assets could be tackled fairly easily if exit price were made the primary basis of corporate financial accounting and reporting. Under the exit price model, all separable assets, whether tangible or intangible, would be reported in the balance sheet on a consistent basis. The exit price accounting model renders irrelevant the *purchased/self-developed* distinction. In the exit price accounting there is no place for goodwill because it is not a separable asset. However, the imperfect transferability of many assets precludes the use of exit price as the dominant measurement basis in accounting.

Intangibles are a very strange creation of the information-age economy. But this is the new reality. We have to accept them, understand them and nurture them. We need new answers to fit new reality. If intangible assets are to be effectively dealt with, new concepts and new recognition and measurement frameworks are needed. The present practice of tinkering with the conventional rules will not do. Efforts should be made to build the system from scratch.

CHAPTER SEVEN

Putting Off Balance Sheet Assets and Liabilities on the Balance Sheet

In recent years there has been a surge in innovative financial instruments that have enabled enterprises to procure finance without increasing their apparent debt level in the balance sheet. New financial markets and institutions have also developed around these financial instruments. These innovative financial instruments have been structured in such a way that they do not meet the criteria for recognition of liabilities. The practice of procuring finance without reflecting the borrowing in the balance sheet is described as *off balance sheet financing*. Simply stated, the term implies that "certain things belong on the balance sheet and that those which escape the net are deviations from the norm" (Davies *et al*, 1997, p. 923). In off balance sheet financing, the total debt of a company increases but the increased debt is not included in the company's balance sheet. The Institute of Chartered Accountants in England and Wales (ICAEW), has defined off balance sheet financing as the "funding or refinancing of a company's operations in such a way that, under legal and existing accounting conventions, some or all of the finance may not be shown on its balance sheet" (ICAEW, 1985). The transformation of liabilities into off balance sheet items is accomplished either by reducing existing assets or by not recognizing newly acquired assets. This is necessary in order to maintain the identity of the balance sheet.

THE PROBLEMS OF OFF BALANCE SHEET FINANCING

Off balance sheet financing is a form of *creative accounting*¹. Enterprises practice creative accounting in order to deliberately distort or misrepresent some underlying economic reality. Naser (1993, p. 59) defines creative accounting "as (1) the process of manipulating accounting figures by taking advantage of the loophole in accounting rules and the choices of measurement and disclosure practices in them to transform financial statements from what they should be, to what preparers would prefer to see reported, and (2)

the process by which transactions are structured so as to produce the required accounting results rather than reporting transactions in a neutral and consistent way". Off balance sheet financing is possibly the most damaging aspect of creative accounting. Enterprises may sometimes be induced to engage in off balance sheet financing transactions for sound commercial reasons. Those that do this have no apparent intention to mislead users of financial statements. In most cases, however, off balance sheet financing transactions are undertaken with the objective of concealing some unpleasant things or projecting a better image.

In the normal circumstances, enterprises acquire their assets, particularly fixed assets, using the pool of capital employed comprising both debt capital and equity capital. The assets thus acquired get reported on their balance sheets. But if an asset is financed off the balance sheet, then neither the acquired asset nor the related debt shows up on the balance sheet. When assets and liabilities are kept off the balance sheet, the balance sheet presentation is distorted. Consequently, financial statement users cannot fully appreciate the commercial effects of the transactions entered into by the enterprise. Off balance sheet financing frustrates the purpose of the requirement of the accounts to be true and fair. A balance sheet that fails to reflect properly the commercial reality of the transactions undertaken by the enterprise is a misleading balance sheet.

Off balance sheet financing has the potential of jeopardizing the interests not only of users of financial statements but also of those that practice it. The excessive use of off balance sheet financing may even lead to the downfall of the enterprise. An enterprise that has excessive debt obligations may transform certain liabilities into off balance sheet items in order to project a better image, but that does not really alleviate its real problems. Moreover, the removal of certain debts from the balance sheet does not absolve the enterprise of the burden of servicing and repaying those debts. Debts have to be serviced and repaid even if they are removed from the balance sheet. Griffiths (1995, p. 127) observes :

It must be remembered that off balance sheet finance, like any other kind of borrowing, has to be repaid eventually. If a business is unable to meet its commitments be they on the balance sheet, off the balance sheet or underneath the balance sheet, then it does not matter how creative or complex a particular scheme is, those liabilities have to be met.

If an enterprise has genuine financial troubles, this fact cannot be concealed for an indefinite period by making some liabilities invisible. No amount of figure massaging or rule manoeuvrings can change the underlying economic reality. If the quality of the balance sheet is improved without improving the underlying economic condition, a time will eventually come when everything will automatically get exposed. Off balance sheet financing is often referred to in the literature as the corporate equivalent of alcoholism or drug addiction in an individual. Jameson (1988, p. 630) maintains: "The appearance of health and normality can, with a considerable effort, be maintained for quite a long time, but when the truth finally breaks through the sufferer may be so far gone that recovery is no longer possible". There are numerous examples of corporate failures that have been caused mainly due to excessive use of off balance sheet financing. The most recent example is Enron. Preliminary investigations into Enron's collapse reveal that the use of several off balance sheet vehicles has been a major contributory factor for the demise of this US power giant.

Off balance sheet financing has become a great headache for the accounting standard-setting bodies around the world. They are now struggling hard to bring this unhealthy accounting practice under control. Several measures have already been promoted to crack down on the practice, but serious problems continue to exist. The issues raised by off balance sheet financing are possibly some of the most crucial and most complex issues the accounting-standard setting bodies have ever addressed. The problems being brought about by off balance sheet financing are different in a fundamental respect from other accounting problems. Generally, when an accounting standard-setting body addresses an accounting issue, its objective is either to add something new to the accounts or to modify the treatment of something that is already there. When it comes to off balance sheet financing, the objective becomes to stop something being taken away from the accounts. In the ultimate analysis, however, the key concern boils down to deciding when and how assets and liabilities should be recognized. Really speaking, it is the recognition issue which is at the heart of the whole subject of off balance sheet financing. Since most off balance sheet financing transactions involve very complex arrangements, difficulties are encountered in determining when and how they give rise to assets and liabilities.

WHY OFF BALANCE SHEET FINANCING EXISTS

Off balance sheet financing exists for a variety of reasons. Some say that off balance sheet financing exists because the concepts, principles and rules that govern the preparation and presentation of financial statements are not adequate and perfect. There are loopholes and gaps in GAAP. This is correct. But there is the other side of the story. Why should enterprises try to take advantage of the loopholes and gaps? They do it because keeping liabilities off the balance sheet gives them certain advantages. The main advantages are discussed below.

Improving the Gearing Ratio

One very important reason why company managers are often motivated to exclude borrowing from the balance sheet is to keep the gearing ratio as low as possible. High gearing levels have adverse effects on share prices. Enterprises use borrowings to gear up the returns earned for the equity shareholders. If borrowed funds can be invested to earn a return that exceeds the cost of borrowings, the excess amount accrues to the equity shareholders. But excessive use of borrowings results in an increase in the financial risk of the borrower. The gearing ratio, which is normally computed by dividing debt capital by equity capital, is widely used by financial analysts as the principal basis for assessing the financial risk of an enterprise. A high gearing ratio is an indication of excessive reliance on borrowed funds. The equity shareholders of an enterprise are its ultimate risk takers. It is the gearing ratio which provides a basis for measuring the degree of risk involved in holding the enterprise's equity shares. Credit rating agencies put a great deal of emphasis on the gearing ratio while rating enterprises. Those that have high gearing ratios are most likely to be adversely rated in the market. Given the importance of the gearing ratio it is a fact that the enterprise management will go to great lengths to ensure that gearing does not exceed what investors perceive to be the *safe* limit. Debts are transformed into off balance sheet items in order to prevent the gearing ratio from rising. The more highly geared a company, the more likely it will engage in off balance sheet financing activities.

Borrowing Power Restrictions

The balance sheet figures normally constitute the basis for negotiating debts and making contractual arrangements for borrow-

ings. If an enterprise has a lower amount of reported debt, it can acquire new debts on favourable terms. The *Articles of Association* often contain provisions restricting the power of managers to procure debts beyond a certain level. These restrictive provisions are inserted in order to ensure that the enterprise is not committed to any unreasonable levels of borrowings. If borrowings touch the maximum limit, no further debts can be procured. In a situation like this, additional debts are procured via the off balance sheet route. This enables the enterprise to increase its borrowings without breaching the *Articles of Association*.

Restrictive Debt Covenants

Generally, creditors do not have any say in enterprise operations. But when there are protective covenants, they may then be in a position to exercise control through such covenants. A covenant is a provision in a debt agreement requiring the borrower to do, or not to do, something. There are debt contracts that contain covenants preventing management from procuring additional debts of higher or equal priority until the existing debts are liquidated. Providers of debt capital often write debt covenants to restrict an enterprise's future borrowings, or require collateral in case of default, or limit the amount that can be distributed as dividends. The restrictions are imposed mainly in order to preserve the value of the existing debts. When debt covenants impose restrictions on additional debts, managers are precluded from borrowing more money. If further liabilities are recorded on the balance sheet, that will amount to a breach of debt covenants. When debt covenants are violated, creditors gain considerable power. To avoid this, managers look for other ways to raise money through off balance sheet transactions.

Improvement in ROCE

Return on capital employed (ROCE) is one of the central performance measures in accounting. Investors and financial analysts use this measure quite frequently in evaluating the financial performance the enterprise. The computation of ROCE involves both the balance sheet and the profit and loss account. An important reason why management might wish to exclude debts from the balance sheet is to keep ROCE as high as possible. ROCE can be improved either by inflating the numerator or by deflating the denominator. Off balance sheet financing affects the ROCE denominator. If debts are kept off the balance sheet, the capital employed

figure is reduced. Enterprises often have sizeable investments in assets that have a long gestation period. These assets do not normally generate any income during the development phase. But they have to be included in the capital base for the purpose of computation of ROCE. As a result, the ratio might be depressed. To overcome this problem, the borrowings that are associated with development-stage assets are matched outside the balance sheet.

Inflationary Distortions

The conventional accounting system makes no attempt to adjust accounts for inflation. Assets, as a result, are understated. When assets are understated, equity is also understated. Consequently, the balance sheet fails to reflect the real debt absorption capacity of the enterprise. According to Naser (1993, p. 65), the failure of the conventional accounting system to accommodate inflation is another possible reason why enterprise management is often induced to keep debts off the balance sheet. According to him, "if assets were reported at current values, less pressure would exist for off balance sheet financing arrangements" (p. 66)

Tax Advantages

Business enterprises have a logical ground to promote measures for reducing their tax burdens. If alternative financing schemes are available, an enterprise would normally be willing to adopt the scheme that leads to lower tax burden. When tax saving is contemplated, the scheme that has higher tax saving potential will be the obvious choice. For example, an enterprise may be induced to choose an operating lease instead of a capital lease because the lease premiums for operating leases are tax deductible. Under a capital lease, the leased asset is to be depreciated over its useful life, which is likely to be longer than the lease term. According to some, the real payoff from off balance sheet financing lies in managing tax position. If off balance sheet transactions are undertaken as an aspect of the enterprise's tax planning, the exercise can by no means be regarded as an immoral one. In fact, it is one of those few uses of off balance sheet financing that have something honourable associated with it.

Management Compensation

In many countries it is a common practice to tie management compensation to reported profits. This practice is adopted in order to align managers' interests with the interests of the shareholders.

If management compensation is tied to reported profits, there will be a natural tendency for managers to increase their compensation by increasing the reported profits. There are several off balance sheet financing schemes that have the potential of increasing the reported profits without any attendant costs. Managers are expected to have an interest in these schemes.

Better Risk Management

Enterprises often engage in off balance sheet transactions for the purpose managing risks. Risk is always a key issue in managing a business enterprise. It is really difficult to make money in business without assuming risks. Every business needs to expose itself to risks in order to increase its reward. The general notion is that the greater the risk, the greater the potential return. But higher risk exposures may also increase the possibility of failure. There are certain risks that can be easily avoided without diminishing the prospect of potential return. The risks that most business enterprises generally try to avoid are exposures to fluctuations in interest rates, currency exchange rates, or equity market conditions that affect share price. Proper risk management requires a well thought-out and complete risk management strategy. In recent years there have developed many sophisticated techniques of risk management. Enterprises are now using different types of complex financial instruments to hedge against various types of risks. Most of the deals involving the use of financial instruments are off balance sheet deals.

METHODS OF OFF BALANCE SHEET FINANCING

Off balance sheet financing takes a variety of forms². They range from the simple to the highly complex. The highly sophisticated schemes of off balance sheet financing are those that are developed based on complex contractual arrangements and relationships. They involve: (1) forming separate entity relationships; (2) separating the legal titles to items from the enjoyment of their benefits and the risks associated with those benefits; (3) emphasizing executory nature of transactions; (4) innovating new financial tools; and (5) repackaging and rebundling existing financial instruments. The different schemes have different features. There are, however, some common themes underlying all of them. Peasnell and Yaansah (1988) consider an off balance sheet financing scheme as a transaction with two characteristics :

Firstly the events involved in setting up such a scheme are 'similar' in some respects to a conventional decision to purchase resources with borrowed money. Secondly, the liability does not have to be reported on the company's balance sheet.

The nature and significance of some of the popular off balance sheet methods and the way in which those methods are operated are narrated below.

Leasing

One of the common forms of off balance sheet financing is leasing. The growth of leasing as a means of financing business assets had its origins in tax incentives rather than in any wish to indulge in creative accounting (Tweedie and Whittington, 1990, p. 88). Leasing is a very important means by which businesses acquire the use of capital assets without having to make full payment at the outset. In the past leasing practices have been confined mostly to land. But now almost all types of properties can be subjected to leasing. According to an estimate, companies in the US lease more than \$150 billion of assets, comprising nearly one fourth of capital assets financed (Bernstein and Wild, 1998, p. 105). A similar situation is prevailing in the UK. Leasing, together with hire purchase, accounts for approximately twenty-five per cent of all fixed capital investment by UK firms (Arnold, 2002, p. 532).

A leasing agreement is essentially a hiring agreement, in which ownership does not pass to the lessee. In *IAS 17* (IASC, 1997b), a lease is defined as "an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time". Leases have become popular because they preserve funds by enabling enterprises to use assets without having to purchase them. Leasing arrangements do not follow any uniform pattern. But all leases are characterized by a common feature, which is that the lessee (the user of the property) has the physical possession and use of the property but the legal title to it remains with the lessor (the original purchaser of the property). Until recently, the enterprise that leased a property did not show it on its balance sheet. Only the rental payment was shown as an expense in the profit and loss account. But current accounting practice requires certain types of leases to be capitalized. Accounting standards have been promulgated in many jurisdictions specifying the circumstances in which leases should be capitalized. The standards make a distinction between finance leases and operating leases. A finance lease is defined as a lease that transfers

substantially all the risks and rewards incident to ownership of an asset (IASC, 1997b). A lease that is not a finance lease is an operating lease. Such a lease involves the lessee paying a rental for the hire of a property for a period of time which is normally substantially less than the property's useful economic life. In an operating lease, the lessor retains most of the risks and rewards associated with the ownership of a property. Operating leases are not capitalized. The capitalization requirement is applicable only to finance leases, which are in substance closer to financed acquisitions. For example, *IAS 17* (IASC, 1984) requires that a finance lease should be recorded in the balance sheet of a lessee as an asset and as an obligation to pay future lease payments.

The lease capitalization requirement has not been proved to be much effective in preventing enterprises from using leasing as a device of keeping finance off the balance sheet. Leasing is still a major means of off balance sheet financing. The capitalization requirement has led to alteration of strategies. The lessees are now required to take some extra amount of trouble – the trouble of structuring what in substance are finance leases as though they were operating leases. At present there are many finance companies that have specialized themselves in lease financing. These companies are financing asset acquisitions on behalf of their customers by making payments directly to the manufacturers in exchange of titles to the assets. The assets are delivered to the customers who use them for virtually the whole of their useful lives. The users make payments to the finance companies on an instalment basis. These leases are in substance instalment purchases by the lessees. But they are kept off the balance sheet by manipulating the terms and conditions of leases.

There is another type of leasing arrangement known as *sale and leaseback arrangement*. It has been and continues to be a popular form of financing in business. Under this arrangement, the original owner sells an asset to another party and then leases it back from the new owner. The beneficial interest in the asset sold is retained by the seller-lessee. The cash received from the new owner is used either in financing new acquisitions or in liquidating some existing debts. The seller-lessee owes an obligation to the purchaser-lessor to pay lease premiums. But neither this obligation to pay premiums nor the asset in question is reported on the balance sheet of the seller-lessee.

• In recent years there has developed a new type of leasing arrangement known as the *synthetic lease*. It is an innovation that

combines the features and advantages of both the finance and the operating lease. The synthetic lease is basically a hybrid lease. It has the attributes of a finance lease in that the lessee can deduct depreciation and interest expenses from pre-tax profit. The operating lease attribute of the synthetic lies in the fact that the leasehold rental obligations do not show up on the balance sheet.

Hire Purchase Arrangements

Hire purchase arrangements are similar in several major respects to finance leases. Many companies use hire purchase contracts to obtain the right to use or purchase assets. Under the conventional system of accounting, assets acquired on hire purchase basis are not to be put on the balance sheet of the purchaser. This is so because when an asset is acquired under the hire purchase contract, it continues to remain the legal property of the seller until an agreed number of instalments are paid and the purchasing enterprise exercises its options to purchase the asset. In real practice, transactions involving instalment purchase of assets are often structured in such a way that the obligations arising thereof can be kept off the balance sheet on the pretext that such transactions are hire purchase transactions.

Subsidiaries and Special Purpose Entities

Many off balance sheet financing schemes involve using other entities to house certain assets and liabilities. These schemes are structured on separate entity relationships. There are conflicting viewpoints as to how an entity should be defined for financial reporting purposes. If an entity has complete control over the resources of another entity, the two are regarded as a single entity. But problems arise when an entity has partial rather than full control over the resources of another entity. The lack of proper specification of the boundaries of entities is creatively used by many to siphon off resources and obligations to other parties by developing different complex relations with them. Subsidiaries have long been used by companies for this purpose. After forming a subsidiary, a company transfers some of its assets and related debts to it. This enables the company to reduce its debt exposure. The subsidiary is also used as a vehicle for borrowing money for the parent. Subsidiaries can be used as a form of off balance sheet financing only when there is no full consolidation requirement. In many countries the preparation and presentation of consolidated accounts is now a legal necessity. There are, however, certain categories of subsidiaries that

are excluded from consolidations. For example, current GAAP in many countries permits exclusion of subsidiaries from consolidations if they have *nonhomogeneous* operations. Finance subsidiaries belong to this category. Many enterprises have captive finance subsidiaries that are used as vehicles for financing the debtors that arise from their normal trading activities.

Special purpose entities (SPEs) constitute another category of entities that are created as a way of achieving off balance sheet financing. These are the entities that are created in order to serve certain designated purposes. SPEs are structured in such a way that they do not meet the definition of *subsidiaries*. By using SPEs an enterprise is able to increase gearing without having to report debts on its balance sheet. When an SPE is first created, the sponsor contributes hard assets and related debt to it in exchange for an interest. The SPE then borrows large sums of money from financial institutions to purchase assets and conduct other business activities. These debts do not appear on the sponsor's balance sheet. The recent Enron episode provides evidence of how creatively SPEs can be used to conceal debts and boost profit. Enron created a large number of SPEs with the objective of conducting business through them. To begin with, the Enron SPEs were capitalized with various types of hard assets and liabilities and some extremely complex financial instruments. Subsequently, they were used to park Enron's troubled assets that were falling in value. This parking enabled Enron to keep the losses of the concerned assets off its books. To compensate partnership investors for downside risks, Enron promised issuance of additional shares of its stock. But as the value of the troubled assets fell, Enron began to incur larger and larger obligations to issue its own shares. The problem compounded further when the market value of Enron's shares fell drastically. The entire episode ended with the demise of the company.

R&D partnerships and joint ventures constitute some other forms of off balance sheet financing vehicles that are created based on the notion of emphasizing separate entity relationships. Under the R&D partnership system, a company creates the off balance sheet financing of its R&D costs through the formation of a limited partnership in conjunction with some outside investors. The sponsor company transfers the right to develop a basic technology to the partnership whose other partners contribute money for further development of the technology. In this way the sponsor company gets its development financed without affecting its balance sheet. The sponsor company often reserves for itself the right to exercise

effective control over the project. But the funds the partnership raises for the project do not appear on the balance sheet of the sponsor company. If the sponsor company were to do the development work itself it would have to report the finance procured for the purpose in its balance sheet. The arrangement differs from the traditional equity financing in that the limited partners receive a claim on only the specific research project covered in the partnership agreement.

In a joint venture, a company obtains funds by combining its know-how with a partner's money. Joint ventures are usually undertaken in order to carry out specific projects. They work in much the same way as the R&D partnerships. Since the projects are not funded out of the company's own funds, the balance sheet of the company is not affected. Gains and losses in a joint venture may arise in various forms. They include profit sharing, interest, management charges, and guarantees or options to transfer assets. Whether or not a joint venture is a quasi-subsidiary of the other party depends on how the benefits and risks are shared. If one of the parties stands to suffer or gain more than the other, then the venture is a quasi-subsidiary of that party. The exclusion of the venture from the consolidated accounts of the parent may result in an understatement of its real financial commitment.

Sale and Repurchase Agreements

Sale and repurchase agreements represent a very popular device of off balance sheet financing. In a sale and repurchase agreement, the seller transfers legal title to an asset to the buyer but the agreement is such that the seller may buy the asset back at a later date. Whisky distiller companies are in the habit of doing this. The practice is also adopted by property development companies. Whisky takes many years to mature. So whisky distillers have to wait for a long period to recover the investments made in stocks and work-in-progress. To overcome the working capital problem, many whisky distiller companies sell their work-in-process inventory to finance companies with a commitment to buy it back on a subsequent date. The transaction is not one of a genuine sale. The concerned inventory may not even leave the premises of the selling company. The price at which the inventory will be bought back in the future is higher than the original sales price. The difference represents rolled-up accrued interest. But if the repurchase price is the market value at the time the repurchase takes place, the transaction represents a straightforward sale. It has no off balance sheet implications.

In judging the commercial substance of a sale and repurchase deal, consideration must be had to the fact of whether the risks and rewards of asset ownership have passed to the buyer. If that has not happened, the deal is essentially a finance deal. The substance of the deal is that a loan has been taken out, secured on the inventory. At the time an alleged sale of this type takes place, the inventory in the balance sheet is replaced by cash. The real aspect of this accounting entry is the receipt of cash. The removal of the inventory is simply a bookkeeping phenomenon. The deal gives rise to off balance sheet financing because both the inventory and the commitment to buy it back are removed from the balance sheet. The cash that is received from the sale is utilized either to repay some existing debts or to acquire other assets.

Factoring of Debts

Factoring of debts is a well-recognized method of obtaining finance and improving cash flows. When an enterprise sells goods on credit, it has to wait for some time before the debtor makes payment for the same. This means that the debtor must be financed by the enterprise making the credit sale. For many enterprises outstanding trade debtors constitute a substantial portion of their annual turnover. Debt factoring is used to pass over the finance of the debtor from the selling enterprise to a special finance enterprise. Under this practice, trade debtors are sold to a factoring agency in exchange for cash. The factoring agency then collects the debts from the selling enterprise's customers when they fall due. Obviously, the factor will be charging a fee and interest on the money advanced. Nowadays it is a common practice among enterprises to sell the debts that arise from exporting goods to foreign countries. In transactions involving sale of trade debts, the debtors are replaced by cash. The sale of trade debts may be with or without recourse. When factoring is done on a non-recourse basis, the factor accepts the risk of non-payment by the debtors. With a recourse sale the arrangement is very much in the nature of taking loans by the pledge of debtors. If full recourse provision is there, it is difficult to treat the transaction as something other than a secured borrowing. In a great majority of cases, however, debtors are sold with limited recourse. This makes it easier on the part of selling enterprise to remove both the book debts and the obligations to the factor from the balance sheet.

In-substance Defeasance of Debts

The defeasance of a debt means the nullification of the debt. A defeasance occurs when the debtor is released from being the primary obligator. Debt defeasance can be of two types: legal and in-substance. In a legal defeasance, the entity ceases to be the party primarily liable for the payment of interest and repayment of principal. This kind of debt defeasance has no off balance sheet implications. Off balance sheet implications may arise when there is an in-substance defeasance of debt. In an in-substance defeasance, the debtor irrevocably places cash or other assets in a trust to be used solely for satisfying scheduled payments of both interest and principal of a specific obligation. After doing this the debt is then taken off the balance sheet by off-setting the trust investment against the obligation. Although the process enables the enterprise to effectively eliminate its obligation to make future payments to the debt holders, it is not legally released from the debt. So the extinguishment is not a real one. The extinguishment of a debt requires another transaction or other event or circumstance affecting the enterprise.

There is a special type of in-substance defeasance called *instantaneous defeasance*. Under this type of arrangement, an enterprise issues debt and sets money aside immediately to retire the debt in due course. The underlying motive is to take advantage of interest differentials existing in money markets without impacting the balance sheet. It is, in fact, a borrow-and-invest activity, not a defeasance.

Asset Securitization

Asset securitization is a recent innovation in the financial markets. This innovation has significantly changed the various aspects of the roles of financial intermediaries. Asset securitization is a flexible form of intermediation that is used to match up savers and borrowers through the financial markets. It provides a channel "through which savers transfer money to borrowers and receive the borrowers' obligations (Frankel, 1997, p. 215). IAS 39 defines securitization as "the process by which financial assets³ are transformed into securities" (IASC, 1999). There are two types of securitization: primary securitization and secondary securitization. When a company raises funds directly from the capital market by selling debt or equity securities, the process is called primary securitization. Secondary securitization is an indirect form of securitization. It involves "the pooling and repackaging of existing

loan assets into securities which are then sold to market investors...." (Feeney, 1995, p. 2). As a matter of fact, the term *securitization* is generally used in the literature to mean secondary securitization. Asset securitization began with home mortgage loans but it has gradually been extended to other assets. Currently, assets such as car loans, business loans, machine leases and credit card bills are also being securitized. The securitization process is even being extended to products not yet produced and to human capital⁴.

The securitization process enables enterprises to convert illiquid assets to liquid securities. Secondary securitization may have off balance sheet features or characteristics. In secondary securitization, the loan assets of a general enterprise are sold for cash to a special purpose vehicle (SPV) enterprise. The vehicle enterprise finances the acquisition of its assets by the issuance of loan notes offering the assets as security. Those who hold the loan notes are not exposed to the risks associated with the assets. The general enterprise that sells the loan assets is called the *originator* and the vehicle enterprise is called the *issuer*. The vehicle enterprise normally has negligible equity and that negligible equity is held by a charitable trust or by some other enterprise close to the originator. Although the originator sells its loan assets to the vehicle, it continues to service the loans and extracts profits from the latter through charging service fees. In most cases, the transfer deed contains provisions empowering the originator to retain the securitized assets on repayment of loan notes. The deed may also contain provisions providing a full recourse to the originator for losses. If the originator retains significant benefits or risks of the loan assets transferred to the vehicle, then the assets continue to remain as its own resources. In such a situation the assets should appear on the balance sheet of the originator. If this principle is followed, the money that has been received by the so called transfer of loan assets should be shown as a liability. But this is not done in practice. Both the securitized assets and the liability are kept off the balance sheet of the originator. This is how securitization gives rise to off balance sheet financing.

Consignment Stocks

The consignment stocks method is one of the oldest methods of off balance sheet financing. It is practiced mainly in the motor dealership industry. A consignment stock is a stock held by one party but legally owned by another on terms which give the holder the right to sell the stock, or at his option, to return it unsold to the legal owner. Legal title to the stock is passed when certain conditions are fulfilled.

In a great majority of cases, the transfer of title takes place when the stock is ultimately sold to the customer. But there are some cases where legal title passes when the dealer has held the stock for specified period. Under the traditional system of accounting, goods received on consignment are not shown in the balance sheet of the consignee on the ground that the legal title to the same has not passed. The obligation to make payment to the consignor is also not shown. Payments for the goods received on consignment are normally made when cash is collected from the customer. Accordingly, the consignee has the benefit of holding inventory without having to pay for it. The financing is done by the consignor.

The terms of consignment arrangements are not standardized. They differ from one situation to another. The most crucial aspect of a consignment contract relates to the bearing of the risk of slow moving inventory. In some cases the consignor bears this risk, while in other cases the risk is borne by the consignee. If the risk of slow moving inventory is borne by the consignee, it should recognize the inventory in its balance sheet. To do something else would be to ignore the economic substance of the transaction.

Loan Transfer

A loan transfer is the sale of the right to receive repayment of a loan. The transfer of a loan gives rise to a gain or loss if there is a change in the rate of interest. Loans are contracts personal to the parties involved. Consequently it may not be easy to transfer a loan to a third party. If a loan is to be transferred, it is to be done either by way of a novation or through an assignment. In the former case, the old contract is cancelled and a new one is drawn up with a new lender. If the original lender has no residual obligations to the borrower, the deal has no off balance sheet implications. Under assignment, some or all of the original lender's rights are assigned to another lender. If the original lender has an obligation to the borrower, then that obligation continues to exist. This may give rise to off balance sheet financing. The presence of off balance sheet financing is evident when the original lender undertakes an obligation to repay the loan at a future date.

Derivative Financial Instruments

Derivative financial instruments (or simply derivatives) are now being widely used by enterprises as a means of widening their funding sources and better managing their financial and operating risks. Investors are also making increasing use of derivatives to

enhance the prospect of their portfolio return. The last decade has witnessed manifold increase in the use of derivatives as financial management tools. This has occurred despite the fact that derivatives provided some of the devastating financial disasters⁵ of the last decade. One of the reasons behind the increasing popularity of derivatives is that they provide a low-cost method of transferring risks. Speculators use derivatives in the hope of making profit from changes in their values or in the values of the related underlyings. Derivatives do not represent any fundamental asset class. They are secondary financial instruments that are derived from underlying assets (eg, bonds, shares and commodities), reference rates, or stock market indices. There are some derivatives that cover more than one underlying. The FASB *Statement No. 133* (FASB, 1998) defines a derivative as a financial instrument or contract :

- Having all three of the following characteristics : 1) one or more underlyings; 2) one or more notional amounts or payment provisions; or 3) both.
- Requiring no initial investment or an initial net investment that is smaller than would be required for other types of contracts driven by the same markets.
- Having terms that require or permit net settlement.

Derivatives are the product of financial technology. They have evolved to provide cost-effective protections against risks associated with rate and price movements. Derivatives are sometimes referred to as finance's version of computers⁶. Although most enterprises use derivatives as a tool of competitive strategy, there are some others that use these financial instruments solely for speculative purposes. Enterprises that use derivatives for speculative purposes may be exposed to devastating losses. Derivatives, in many respects, are similar to securitized assets. But unlike the latter they do not represent obligations backed by the original issuer of the underlying assets or securities. There are four principal classes of derivatives. These are: options, forward, futures, and swaps. An option contract gives the holder the right, but not the obligations, to buy or sell an asset in the future at an agreed-upon price. A forward contract is a legally enforceable contract between two parties to buy and sell a specific quantity of a commodity, foreign currency or financial instrument at a specified price, with delivery and/or settlement at a specified future date. A futures contract is a forward-based contract to make or take delivery of a specified foreign currency, financial instrument or commodity during a specified period, at a specified price or yield. Future contracts, which often have provisions for cash

settlement, are very similar to forward contracts. The main distinction between the two is that while forward contracts are tailored to meet the specific needs of the contracting parties, futures contracts have standardized terms and are traded on a financial exchange. Swaps are private agreements between two entities to exchange cash flows in the future according to prearranged terms and formulas. Two types of swaps may be identified: currency swaps and interest rate swaps. Swaps contracts are of much longer duration than other derivative contracts.

Most transactions involving the use of derivative financial instruments have off balance sheet implications. The rights and obligations inherent in derivatives are not presented in the balance sheet because their accounting implications often are not immediately obvious. The current accounting framework is incapable of dealing with the specific problems presented by most derivatives. There are many derivatives that may hold considerable off balance sheet risks that are transferred to the enterprise on the dates of the respective contracts. One key accounting difficulty with most derivatives is that they do not have readily ascertainable costs. If a derivative is acquired for no cost, it cannot appear in the traditional historical cost-based balance sheet. Accounting difficulty also arises if derivatives are acquired at nominal or insignificant costs. Moreover, the executory nature of most derivative contracts prevents them from being considered for inclusion in formal accounting records. As has been seen before, executory contracts are not recognized in the financial statements at inception date. Performance of a derivative contract is at a future date when the right is actually exercised.

In addition to those discussed above, there are several other methods of off balance sheet financing. Examples include assignment of work-in-progress, thorough-put agreements, take-or-pay arrangements, loan syndication, and immunization. Off balance sheet financing represents a rapidly changing scenario. New and innovative schemes are emerging at a faster rate than ever before. Accounting standard-setting bodies, both at the national and international levels, are doing their best to keep pace with the rapidly changing financial markets scenario but the gap continues to widen. As one requirement is being introduced to bring the obligations from a certain scheme of off balance sheet financing on to the balance sheet, new and innovative means are soon being devised to take its place.

RECORDING AND REPORTING OF OFF BALANCE SHEET ASSETS AND LIABILITIES

Off balance sheet financing is not a healthy practice. Keeping financing transactions off the balance sheet has the potential to obscure the true extent and nature of an enterprise's economic obligations. The existence of off balance sheet financing on a major scale is considered to be a real threat to the reliability and integrity of corporate financial accounting and reporting. If financial statements are to convey meaningful information to users, they must be informative about the underlying commercial reality of the transactions undertaken by the enterprise. The exclusion of certain obligations from the balance sheet results in the enterprise's financial risks being understated. The UK ASB in its *FRS 5* states :

The effects of off balance sheet financing make it harder for the reader of the accounts to assess the true economic position of the reporting entity because they obscure the true extent and nature of its borrowings, its assets and the results of its activities (ASB, 1994, Appendix III, paragraph 4).

Accounting regulatory agencies are struggling hard to develop appropriate means for countering off balance sheet financing and other creative accounting practices. They have already promoted some concrete measures in order to bring certain specific categories of off balance sheet assets and liabilities onto the balance sheet. As a result, the balance sheet now contains various property rights and supported obligations that have been kept off the balance sheet in the past. Further moves are under way to impound other off balance sheet transactions in the balance sheet.

There are two approaches to the solution of off balance sheet financing problems: rules-based approach and principles-based approach. Under the rules-based approach, detailed rules have to be formulated to address each and every off balance sheet financing issue. The principles-based approach, on the other hand, is designed to focus on basic principles. The US FASB has adopted the first approach. It has promulgated a number of individual accounting standards on particular topics of off balance sheet transactions. The difficulty with the rules-based approach is that it encourages rule-blending and loophole-seeking. The approach also delivers the possibility of inviting creative compliance. In a rule-driven environment, accountants demonstrate a natural tendency to be driven by the letter of the requirement rather than the principle behind it. The more detailed the rules, the more accountants can circumvent them.

As McBarnet and Whelan (1999, p. 28) put it, specific rules “foster cat and mouse games, with regulators catching one creative device with a specific rule, only to find a new technique taking its place.

The principles-based approach looks at the problem from a conceptual point of view. Many are inclined to believe that the principles-based approach has a better chance of winning the battle than the rules-based one. Some precise rules may have to be formulated even under the principles-based approach to tackle specific issues, but those rules should operate within the broad principles that govern the key issue of *what should be on the balance sheet and when*. The UK ASB has opted for this second approach. To begin with, it addresses the subject from a conceptual angle by focusing on the notion of *substance over form*. According to this notion, transactions and other events should be accounted for and presented in accordance with their substance and commercial reality and not merely with their legal form. If the commercial reality is that the enterprise has a financial commitment, it should be reported in the balance sheet regardless of its legal form. The IASC's approach is also similar in many respects to that of the UK ASB. In the following sections a brief analysis is made of how the leading accounting standard-setting bodies of the world are trying to solve the off balance sheet financing problems.

The IASC Approach

The IASC approach prefers principles to detailed rules. Its primary emphasis is on reporting the substance of transactions. The *IASC Framework* (IASC, 1989) identifies *substance over form* as a necessary part of the qualitative characteristics of accounting information. According to the *Framework*, if information is to represent faithfully the transactions and other events that it purports to represent, it is necessary that they are accounted for and presented in accordance with their substance and economic reality and not merely their legal form (paragraph 35). The *Framework* has sought to implement its *substance over form* principle through its definitions of the financial statement elements and their recognition criteria. The central consideration is whether a transaction or event has given rise to new assets and liabilities and whether it has changed any existing assets and liabilities.

The notion of *substance over form* plays an important part in most of the IASC standards that are designed to deal with the transactions with off balance sheet implications. In its accounting standard *IAS 1* (revised), which prescribes the basis for presentation

of general purpose financial statements, the IASC (1997) requires that the accounting policies selected by management should be reliable in the sense that they should reflect the economic substance of events and transactions and not merely the legal form (paragraph 20). One frequently used technique of keeping items off the balance sheet is to offset assets and liabilities (eg, netting off loans received against the assets they finance). *IAS 1* prohibits offsetting of assets and liabilities unless this is specially required or permitted by another International Accounting Standard (paragraph 33). The determination of the substance of a transaction may appear to be difficult if the legal title to an item is separated from the ability to enjoy the benefits and the exposure to the risks associated with those benefits. Difficulties in judging the substance of a transaction or event may also have to be encountered if that transaction or event is linked with one or more of the others in such a way that the commercial effect cannot be understood without reference to the series as a whole. The associated risk factor may provide a basis for evaluating transactions and events whose substance is not readily apparent.

Several International Accounting Standards have requirements relating to off balance sheet financing. These include *IAS 17*, *IAS 24*, *IAS 27*, *IAS 31*, *IAS 32*, and *IAS 39*. The first major International Accounting Standard that emphasized the notion of *substance over form* was *IAS 17*. The standard was designed to deal with leases. Under this standard, finance leases are to be recognized as assets even though they may not be owned by the lessee. Prior to the issue of the original IASC lease accounting standard in 1982 the leased asset and its related financial commitment were not shown on the lessee's balance sheet. Now the lessee is to capitalize a finance lease at the lower of the fair value and the present value of the minimum lease payments. If a lease is an operating lease, the capitalization requirement does not apply. The lessee is to expense operating lease payments. For a sale and leaseback that results in a finance lease, any excess of proceeds over carrying amount is to be deferred and amortized over the lease term.

The standard's approach to classifying a lease as either a finance lease or an operating lease is based not on any numerical index but on some descriptive criteria. The distinction that is made between the two seems to be somewhat arbitrary and unsatisfactory. It provides scope for manipulations. The lessee can report an in-substance finance lease as an operating lease by manipulating the terms of the lease contract. The IASC lease accounting requirements will alter significantly if the G4+1 proposal for reform, which is

awaiting agenda decision, is given effect to. According to this proposal, all material rights and obligations arising under lease contracts which meet the definitions of assets and liabilities would have to be recognized as assets and liabilities by the lessee. In practice, this would mean capitalization of many of the operating leases.

IAS 27 (IASC, 1994) represents another International Accounting Standard with *substance over form* emphasis. The standard relates to consolidation of accounts. *IAS 27* has materially altered the definition of control included in the old *IAS 3*. According to the new definition, control can exist even though the parent does not hold more than half of the voting shares. For example, if the parent has power to govern the financial and operating policies of an enterprise with a view to gaining economic benefit from its activity, control is presumed to exist. The new definition of control has substantially reduced the scope of using subsidiaries as a way of keeping finance off the balance sheet. The definition is applicable to SPEs as well. According to the IASC interpretative document *SIC 12* (IASC, 1998d), an SPE should be consolidated if the substance of the relationship indicates that a control does exist. This interpretation has significantly broadened the scope of consolidation.

The principle of *substance over form* is an important determinant of the accounting requirements relating to joint ventures under the revised *IAS 31* (IASC 1998e). The standard addresses the issue of reporting of interests in joint ventures. It recognizes three types of joint ventures: jointly controlled operations, jointly controlled assets, and jointly controlled entities. Jointly controlled operations should be recognized by the venturer by including the assets and liabilities that it controls. Jointly controlled assets should be recognized on a proportionate basis. For jointly controlled entities, the favoured treatment is proportional consolidation.

In its accounting standard *IAS 39* the IASC (1998f) has sought to tackle what is considered to be the most difficult and most challenging accounting issue of the present time — financial instruments. The standard, which is an interim requirement, is built on the groundwork of its earlier standard on the subject, *IAS 32* (IASC, 1995). *IAS 32* is basically concerned with disclosure and presentation. But the focus of the second standard is on recognition and measurement. At the heart of *IAS 39* is the notion of *substance over form*. The standard represents a major attempt to put financial assets and liabilities, including financial derivatives, on the balance sheet. One of the vital components of the standard is hedge

accounting⁸. The standard requires that all financial assets and liabilities, including financial derivatives, should be recognized in the accounts. It also establishes concepts for recognizing, measuring and disclosing information about these assets and liabilities. Under this standard, most investment in debt and equity securities will be carried at fair value and nearly all derivative instruments will be marked-to-market. For those financial assets and liabilities that are remeasured to fair value, there is an option either to recognize the entire adjustment in net profit of the period or to recognize in the profit for the period only those changes in fair value of financial assets or liabilities that are held for trading.

IAS 39 is a very complex accounting standard. The concepts it aims to introduce and the methodology it seeks to adopt for measuring financial instruments appear to be difficult to comprehend. Even experts have found it difficult to interpret the standard. The newly constituted IASB is now trying to simplify the requirements. It has already issued an exposure draft on the subject. The document proposes a number of important changes to the existing standard. One of these changes relates to providing more robust guidance about how to determine fair values. The document does not intend to change the fundamental approach to accounting for financial instruments as contained in the original standard. The changes, if implemented, will enable enterprises to recognize and measure financial assets and liabilities consistently.

The UK Response

In the UK, the ASB has produced a mega accounting standard, *FRS 5* (ASB, 1994), to provide a conceptual basis for dealing with issues relating to off balance sheet financing. The standard has been formulated based on the underlying notion that the balance sheet is the fundamental accounting statement. Accordingly, its focus is on assets and liabilities. The governing tenet of the standard is that, when determining the nature of a transaction, one need to decide whether, as a result of the transaction, the enterprise has generated new assets or liabilities or whether it has changed any of its existing assets or liabilities (paragraph 16). The standard defines assets and liabilities in the same manner as is done in the *SoP*. Its overriding requirement is that transactions and other events should be accounted for according to their commercial substance rather than their legal form. In fact, this requirement constitutes the core of the standard. It seeks to ensure that the commercial effect of the enterprise's transactions, and any resulting assets, liabilities, gains

or losses, are faithfully represented in its financial statements. The standard states :

A reporting entity's financial statements should report the substance of the transactions into which the entity has entered. In determining the substance of a transaction, all its aspects and implications should be identified and greater weight given to those more likely to have commercial effect in practice. A group or series of transactions that achieve an overall commercial effect should be viewed as a whole (paragraph 14).

FRS 5 sets out general principles covering the following areas:

- How to determine the substance of a transaction;
- What is excluded from the scope of the standard;
- Whether any resulting assets and liabilities should be included in the balance sheet;
- At what point there should be changes in previously recognized assets;
- Whether any vehicle company incorporated into a transaction should be consolidated;
- What disclosures are necessary; and
- Under what circumstances a linked presentation is appropriate.

In order to determine the substance of a transaction (or groups or series of transactions where appropriate) it is necessary to consider all aspects and implications of the transaction. If the transaction is a complex one, the motivations and expectations of all parties to the transaction are to be examined carefully. The ultimate focus should always be on the underlying commercial logic. *FRS 5* applies to all enterprises whose financial statements are intended to give a true and fair view. The standard is couched in pretty general terms. Where the general principles of the standard seem to apply to an asset or liability which is subject to the requirements of a more specific standard, the specific requirements of the other standard should be applied. Certain transactions, because of their special nature, are kept outside the scope of *FRS 5*. These include forward contracts and futures, foreign exchange and interest rate swaps, contracts where a net amount will be paid or received based on the movement in a price or an index, expenditure commitments, and employment contracts.

According to the standard, an asset or liability should be included in the balance sheet where there is sufficient evidence that it exists, and that it can be measured at monetary amounts with sufficient reliability. A previously recognized asset should continue to be

recognized if there is no significant change in either the reporting enterprise's access to benefits or exposure to the risks inherent in those benefits. An asset should cease to be recognized only where two conditions are both fulfilled — that the enterprise retains no significant access to material benefits, and that any risk it retains is immaterial in relation to the variation in benefits likely to occur in practice.

FRS 5 provides a weapon against vehicles (quasi-subidiaries) that do not meet the legal definition of a subsidiary. It requires consolidation of a vehicle which, though not fulfilling the statutory definition of a subsidiary, is controlled by the reporting entity and gives rise to benefits for that entity that are in substance no different from those that would arise were the vehicle a subsidiary (paragraph 7). The standard identifies one set of circumstances where the accounting treatment of a vehicle would differ from that of a subsidiary. This occurs when the vehicle holds either a single item or a single portfolio of similar items that are financed in such a way as to require a linked presentation.

The standard has a number of disclosure requirements. Where assets or liabilities are recognized but their nature differs from that of items usually found under the relevant balance sheet heading, explanatory details should be provided as to nature of the differences. The standard further requires that disclosure of a transaction in the financial statements, whether or not it has resulted in assets or liabilities being recognized or ceasing to be recognized, should be sufficient to enable the user of the financial statements to understand its commercial effect (paragraph 30).

Linked presentation involves the setting-off on the face of the balance sheet the liability against the asset. *FRS 5* permits linked presentation only in cases of certain non-recourse finance arrangements. Under the standard, linked presentation is possible in situations where the finance has to be repaid from the benefits generated by the asset and the borrowing entity has no right to keep the item or to repay the finance from its common funds. In some non-recourse finance arrangements an entity retains significant benefits and risks associated with a specific item, but the maximum loss it would suffer is limited to a fixed monetary amount. In such circumstances a linked presentation is required to properly reflect the nature of such an arrangement.

FRS 5 incorporates specific application notes governing the treatment of items such as consignment stock, sale and repurchase agreements, factoring of debts, securitized assets, and loan

transfers. The application notes give detailed guidance concerning the treatment of specific transactions. They specify how the requirements of the standard are to be applied to those transactions. Each application note has three sections: features, analysis and required accounting. The first section describes the nature of required transactions. The second section analyses the transactions in terms of the framework of the standard, and the last section covers recognition in the financial statement and disclosure in the notes. The application notes do not override the basic principles.

FRS 5 has been described in the literature as a unique accounting standard. It has been referred to as the "centerpiece of ASB's assault on creative accounting". There is no equivalent accounting standard elsewhere in the world. The ASB believes that the standard will be able to effectively regulate off balance sheet financing whereby companies have taken advantage of loopholes in law and existing accounting standards to misrepresent and distort financial statement presentation. The standard is not going to change the way vast majority of transactions are accounted for. This is so because the substance of most transactions can be determined relatively easily. If the substance of a transaction is easily determined, it will be accounted for based on existing practice. The standard will affect the accounting treatment of those complex transactions the substance of which is not easy to understand. These are the transactions that often involve the repackaging of rights, rewards, risks and obligations. The standard requires auditors to be more vigilant than ever before when their clients come up with schemes which are aimed at keeping debts off their balance sheets. Many have, however, expressed concern that the standard is too complex and too difficult to understand. Some have even argued that the tests to be applied to determine substance may be susceptible to creative compliance. It is indeed very difficult to produce a foolproof accounting standard especially when the issue being addressed is a very complex one. There is evidence suggesting that *FRS 5* has been fairly successful in curbing the excesses of off balance sheet financing.

In the UK, specific aspects of off balance sheet financing are addressed in some individual accounting standards. The Accounting Standards Committee, the predecessor to the ASB, first addressed the subject when it issued *SSAP 21* in 1984 (ASC, 1984). Though the standard was promulgated long before the emergence of *FRS 5*, its requirements are consistent with the provisions of this mega standard. *SSAP 21* provides solution for one form of off balance

sheet financing — leases. The standard requires that all finance leases should be on the balance sheet. According to the standard, higher purchase contracts which are akin to finance leases should also be capitalized. The standard makes specific reference to sale and leaseback transactions. If a leaseback transaction is a finance lease, it should be capitalized.

A finance lease is defined in *SSAP 21* as a lease that transfers substantially all the risks and rewards of ownership of an asset to the lessee (paragraph 15). The standard presumes that a lease is a finance lease if at the inception of the lease the present value of the minimum lease payments is 90 per cent or more of the fair value of the leased asset. The ASB is now planning to replace the present distinction between finance leases and operating leases with a single method of accounting that applies the same principles to all leases and is consistent with the balance sheet model.

One very important area of off balance sheet financing is the involvement of subsidiaries. The UK Companies Act 1989 has sought to curtail drastically the use of quasi-subsidaries for off balance sheet financing. The Act sets out a new definition of a subsidiary that is based on control rather than voting rights. The new definition aims at tackling one of the recurrent techniques used in the past in a whole range of off balance sheet financing devices — the controlled non-subsidiary. This corporate structure functioned like a subsidiary but was outside consolidated accounts. The new definition is intended to capture any relationships where there is actual exercise of dominant influence and a participating interest. The provisions of the Act have been incorporated into *FRS 2* (ASB, 1992). The aim of this accounting standard is to see consolidated financial statements that give a full picture of the economic activities and financial position of the groups concerned. The standard has made mandatory certain exemptions permitted by the Act. It has also tried to counter abuse of the exemptions by limiting the situations in which they could be involved. If both the Companies Act and *FRS 2* fail to tackle the problem of controlled non-subsidiaries, then *FRS 5* will take over.

FRS 4 (ASB, 1994) and *FRS 13* (ASB, 1998) have substantially tightened up the disclosure of complex financial arrangements that are capable of misleading the users of financial statements into thinking that an enterprise is far stronger than it really is. *FRS 4* has been issued to clamp down on hybrid financial instruments, which are also known as *balance sheet gimmicks*. It seeks to ensure that financial statements provide a clear, coherent and consistent

treatment of capital instruments, in particular as regards the classification of instruments as debt, non-equity shares or equity shares. The objective of *FRS 13* is to ensure that disclosures are made within financial statements which enable users to assess the enterprise's objectives, policies and strategies for holding or issuing financial instruments. The standard requires both narrative and numerical disclosures. In introducing the standard, Sir David Tweedie (then chairman of the ASB) said :

Many companies now use types of financial instruments that can transform the business's risks profile overnight yet under previous practice would be hidden from view. The standard shines a torch into a darkened room, enabling users of accounts to understand the impact and significance of these instruments.

Under the standard, enterprises are required to provide a discussion of the major financial risks they face in their activities and how they manage their exposure to these risks. The standard identifies the following four types of risks associated with financial instruments: credit risk, liquidity risk, cash flow risk, and market price risk.

FRS 13 is an interim accounting standard. It covers only the disclosure aspects of financial instruments. The ASB has expressed its intention to address the recognition and measurement issues in a subsequent standard.

The UK Companies Act has an overriding requirement to the effect that companies give a true and fair view in their accounts. Compliance with the provisions in statute or accounting standards will normally be necessary for accounts to give a true and fair view. But the requirement to give a true and fair view may in special circumstances require a departure to be made from specific provisions in statute or standards. The true and fair override provides an additional safeguard or additional line of defence against creative accounting. It serves as a useful weapon against accounting treatments which comply with the letter of specific provisions in statute or standards but not the spirit.

The US Initiatives

The accounting profession in the US has dealt with off balance sheet financing problems for the last 30 years or so. There are a number of specific accounting standards in the US for particular areas of off balance sheet financing. The areas covered by the standards include leases, sale and leaseback, sale and repurchase agreements, subsidiary companies, factoring of debts, debt defea-

sance, and financial instruments. Lease accounting in the US is addressed in *SFAS No. 13* (FASB, 1976). The conceptual foundation underlying FASB's lease accounting is based on the notion that a lease that transfers substantially the entire benefits and risks incident to ownership of property should be accounted for as an acquisition of an asset and the incurrence of an obligation by the lessee and as a sale or financing by the lessor. The standard offers specific criteria to assist in classifying leases as either capital or operating leases. Under these criteria, a lease transaction is viewed as equivalent to a sale if any of the following conditions hold: (1) ownership of the asset is transferred to the lessee at the end of the lease term; (2) the lessee has the option to purchase the asset for a bargain price at the end of the lease term; (3) the lease term is 75 per cent or more of the asset's expected useful life; or (4) the present value of the lease payments is 90 per cent or more of the fair value of the asset. Lease contracts that do not qualify as an effective sale are termed operating leases and these leases are carried off the balance sheet, with footnote disclosure of future minimum, non-cancellable lease payments. Transactions involving sale and leaseback are to be accounted for in the US according to the provisions of *SFAS No. 28* (FASB, 1979) and *SFAS No. 98* (FASB, 1988). *SFAS No. 98* is applicable to transactions relating to real estate, and *SFAS No. 28* is applicable to transactions relating to all other assets. Under these standards, most sale and leaseback transactions are treated as a single economic event according to the lease classification criteria contained in *SFAS No. 13*.

SFAS No. 13 has significantly curtailed one of the most widely used methods of off balance sheet financing in the US (Schroeder and Clark, 1995, p.515). But some problems still persist. There is evidence suggesting that some enterprises still attempt to circumvent the requirements of the standard by manipulating the terms of agreements of the lease contracts.

According to the rules currently in force in the US, all majority-controlled subsidiaries (except those in bankruptcies or in the process of being sold) must be consolidated with the financial results of the parent company. Before the promulgation of *SFAS No. 94* (1987), a wide range of consolidation practices existed among US companies. The new standard, whose issuance was prompted mainly by concerns over off balance sheet financing, requires the consolidation of nearly all subsidiaries. Consolidation under this standard is based on ownership of a majority voting interest. The standard emphasizes the legal form of control. The FASB is

considering a complete revision of the definition of *control* to emphasize economic substance over legal form. In its proposed statement on consolidations, the FASB (1999, paragraph 10) defines control as a parent enterprise's non-shared decision making ability that enables it to guide the ongoing activities of its subsidiary and to use that power to increase the benefits that it derives and limit the losses that it suffers from the activities of that subsidiary. If the proposal is implemented, it will significantly change the basis for consolidated financial statements. The new definition will also reduce the scope of using SPEs as vehicles of conducting off balance sheet transactions. Under the proposed rules, an SPE would have to be consolidated by its primary beneficiary when the SPE lacks sufficient independent economic substance.

SFAS No. 94 does not cover joint ventures. Accounting rules relating to joint ventures are contained in *APB Opinion No. 18* (AICPA, 1971). It requires venturers to use the equity method of accounting for investments in corporate joint ventures. The standard does not address accounting for investments in unincorporated joint ventures. This is an area where the problem of off balance sheet financing continues to exist. The FASB has undertaken a study to address the issue.

The FASB has addressed the problem of off balance sheet financing relating to product financing arrangements in *SFAS No. 49*. Under product financing arrangements, an enterprise sells a product to a third party and in a related transaction agrees to either repurchase it at a price equal to the original selling price plus carrying and related costs or sometimes guarantee a selling price to third parties. If the arrangement means that the product will be repurchased at a predetermined price, then it is an in-substance financing arrangement. The standard requires that such a transaction should be treated as a borrowing. A similar treatment also applies where the enterprise has an option to repurchase the product and will be subject to a significant penalty if it fails to exercise the option.

SFAS No. 77 (FASB, 1983) deals with the problem of off balance sheet financing arising from debt factoring. The standard requires the transfer of receivables to be recognized as a sale if certain specific conditions exist. These conditions are related to the factor's ability to put the receivables back to the borrower. When the transfer of receivables is treated as a sale, no liability is to be recorded on the balance sheet of the transferor. But if the specific conditions mentioned in the standard do not exist, the amount of the proceeds received by factoring receivables is to be recorded as a liability.

SFAS No. 140 is the most recent FASB (2000) accounting standard on the subject of transfer and servicing of financial assets and extinguishment of liabilities. The standard replaces *SFAS No. 125* (FASB, 1996). The new standard is based on the notion of consistent application of a financial components approach that focuses on control. Under this approach, after a transfer of financial assets, an enterprise recognizes the financial and servicing assets it controls and the liabilities it has incurred, derecognizes financial assets when control has been surrendered, and derecognizes liabilities when extinguished. The standard distinguishes transfers of financial assets that are sales from transfers that are secured borrowings.

The FASB has promulgated a series of accounting standards on financial instruments. The process started with *SFAS No. 80* (FASB, 1984). The standard deals with exchange-traded future contracts (other than foreign currency futures). It requires that a change in the market value of an open futures contract be recognized as a gain or loss in the period of the change unless the contract qualifies as hedge of certain exposures to price and interest rate risk. The next standard in the series was *SFAS No. 105* (FASB, 1990). It applies primarily to swap contracts and its focus is on disclosure of information about off balance sheet risk of financial instruments. Examples of financial instruments with off balance sheet risk include outstanding loan commitments, outstanding commercial letters of credit, financial guarantees, recourse obligations on receivables sold, and obligations to repurchase securities sold. The standard requires disclosure of the contract amount, the nature and terms of the instrument, the cash requirements, the accounting loss the entity would incur if any party to the financial instruments failed to perform according to the terms of the contract, and particulars about collaterals.

SFAS No. 107 (FASB, 1991) was developed to address the issue of disclosure of fair values of financial instruments for which estimation of fair values is practicable. The standard requires all entities to disclose the fair values of financial instruments in the notes to their financial statements. The requirements apply to financial instruments regardless of whether they are assets or liabilities or whether they are reported or not reported in the balance sheet. The standard does not require fair values in the primary financial statements. Derivative financial instruments are not covered by this standard. These instruments are covered by *SFAS No. 119* (FASB, 1994). *SFAS No. 119* requires disclosure of amounts, nature, and

terms of derivative financial instruments such as futures, forwards, swaps, option contracts and other financial instruments with similar characteristics.

The latest major FASB standard that deals with financial instruments is *SFAS No. 133*. It seeks to standardize the accounting rules for all derivatives. The standard, which was promulgated in 1998, is one of FASB's most complex accounting standards. *SFAS No. 133* (FASB, 1998a) establishes accounting and reporting standards for derivative instruments, including those that are embedded in other host contracts, and for hedging activities. The FASB has developed this standard in order to achieve its objective of measuring all financial assets and liabilities on company balance sheet at fair value. According to the standard, all derivatives must be carried on the balance sheet at fair value and changes in the fair value of derivatives must be recognized in income when they occur. If a derivative qualifies as a hedge, then an entity may elect to adopt hedge accounting to eliminate or reduce the income statement volatility that would arise from reporting changes in a derivative's fair value in income. The standard contains extensive disclosure requirements.

There are several other accounting standards in the US that have provisions relating to one or more specific aspects of off balance sheet financing. In fact, the US currently has the largest number of accounting standards on the subject. As it has been mentioned earlier, the FASB accounting standards are biased towards rules. They offer detailed prescriptions as to what should or should not happen in specific circumstances. This has become so because accounting regulators in the US have always preferred detailed accounting rules to general principles. But it now seems that the proliferation of detailed rule-based accounting standards has become to some extent counterproductive. It has almost displaced professional judgement in financial reporting. Currently, the US rule-based approach to accounting is being criticized from various quarters. The Enron collapse has made it amply clear that prescriptive rules may not always be the answer to everything. Enron may ultimately push US accounting standard setters in the direction of more principles-based standards.

Corporate enterprises in the US are required to present their financial statements fairly in conformity with generally accepted accounting principles. Fair presentation is a necessity but it cannot take precedence over any specific requirements of accounting standards or other regulatory rules. The idea is that if financial

statements are prepared strictly in accordance with the accounting standards and statutory provisions, fair presentation will automatically be achieved. This is where there lies a fundamental difference between the US and UK accounting philosophy. The UK accounting philosophy is that, giving a true and fair view is far more important than adhering to all the detailed rules. In the US, fair presentation has no overriding power.

CONCLUSION

Off balance sheet financing is a contentious, complicated subject, and each particular aspect of it is itself at the heart of a huge debate. Accounting standard-setting bodies are trying to solve the problems of off balance sheet financing by emphasizing the balance sheet model and the notion of *substance over form*. The guiding principle is sound. It tells that if a company has incurred an obligation, that obligation should be on its balance sheet. Through continued research and diligent efforts, accounting standard-setters have been able to defeat many of the schemes enterprises use to transform liabilities into off balance sheet items. The visibility of debt, as a result, has increased. But there are still many unresolved issues. More concerted efforts are necessary to tackle these issues. It should, however, be mentioned in this context that accounting standards cannot solve all the problems of unethical accounting. Accounting standards cannot make dishonest people honest. Paterson (2002, p. 100) observes :

It is important to rememberthat no amount of standard setting will make devious people honest. The role of accounting standards is simply to give our profession authoritative guidance as to appropriate methods of accounting. We still then need management with enough integrity, auditors with enough backbone, regulators with enough clout and users of accounts with enough perception to safeguard the financial reporting process.

Accounting standards are important. But they are not sufficient to eliminate all abusive accounting practices. The honesty and integrity of the parties involved in financial reporting are also of crucial importance in ensuring the fairness of financial statements and financial reporting. Emphasis has particularly to be placed on the development of a stronger and more ethically oriented independent audit system. Measures have to be adopted to ensure that the audit profession adheres to the highest ethical standards.

CHAPTER EIGHT

Recapitulation and Conclusion

The balance sheet has made a glorious come back. After remaining subservient to the profit and loss account for much of the last century, the balance sheet has come back to take the centre-stage in corporate financial accounting and reporting. The profit and loss account rose to prominence in the first half of the last century by displacing the balance sheet in importance. Since then it has retained its dominating position. But the situation is now changing very rapidly. The supremacy of the profit and loss account is being increasingly questioned. There are plans afoot to demote the profit and loss account in favour of the balance sheet. Although the revival process has not yet run its course, some significant new developments have already taken place. The balance sheet has already taken over from the profit and loss account in many important areas of accounting practice and it is poised to establish its supremacy in the remaining areas. The balance sheet is virtually the king in the conceptual frameworks the leading accounting standard setters of the world have developed to guide their standard-setting work. These standard setters are now putting increasing emphasis on their conceptual documents as the starting point for addressing complex and controversial corporate financial accounting and reporting issues. As a result, a whole new area of financial reporting practice is emerging, centring on the notion of awarding primacy to the balance sheet.

The profit and loss account approach focuses on revenues and expenses. It requires transactions to be attributed to appropriate accounting periods for financial reporting purposes. The central tenet of the approach is periodic matching of historical costs with revenues. Financial reporting process under this approach is primarily governed by the rules of revenue recognition and cost matching. The matching process is very simple and it is also very easy to operate. But this is where the difficulty lies. When simple techniques are used to capture complex events and phenomena, troubles begin to arise. The complex financial reporting issues that businesses are facing today cannot be tackled effectively simply by looking at past transactions and events. In the new information-age

economy the rules of business have changed. Matching does not at all fit into the new schemes of things that have emerged. It is incapable of providing a rational starting point for addressing the difficult accounting problems businesses are facing today. The information generated by the matching process often goes wrong in several different ways. In many cases, it gives a completely distorted picture of the financial position and performance of the enterprise.

The major conceptual deficiency of matching is that it seeks to specify the parameters of income without first specifying the parameters of wealth. In the information age-economy it has become imperative for businesses to know more about their wealth than about their income. Most of the shortcomings of the matching-based accounting model stems from its failure to start from the right place. Some of the perceived shortcomings of the model are summarized below :

- It fails to provide a coherent and consistent basis for addressing complex financial accounting and reporting issues
- The concept of matching revenues and costs does not provide a satisfactory basis for development of a concept of profit. The definition of profit under the revenue-expense view does not depend on the definitions of assets and liabilities.
- It focuses on revenues and expenses and assigns only a secondary role to assets and liabilities. Matching is less concerned with whether items are assets and liabilities than with whether costs are appropriately matched with revenues.
- It is unable to produce consistent definitions of the elements of financial statements.
- It has a rule-making bias. New accounting problems are tackled by formulating new rules. This has the ultimate effect of reducing financial reporting to a rule-driven exercise.
- It puts undue emphasis on realization, which is not any economically significant phenomenon.
- It fails to take account of the physical accretion, which is a key phenomenon in enterprises dealing with biological assets.
- It involves time allocations which are necessarily arbitrary.
- The revenue-expense approach fails to produce sensible answers in the balance sheet. Matching tends to reduce the balance sheet to a statement of residuals or a sheet of

balances. The matching process gives rise to assets and liabilities in the balance sheet that include many deferred debits and deferred credits. These items are difficult to interpret.

- Enterprises often use matching as a vehicle to artificially smooth their periodic profits through the deferral of ambiguous and spurious costs. This tends to distort financial reporting information.

Although the matching process is still being used extensively in many areas of generation of financial reporting information, it no longer is considered to be central driving force in accounting. Matching is now seen as an occasionally useful technique rather than a concept of profit. It is being allowed to operate in those areas where the possibility of information distortion is relatively less. The balance sheet model is taking hold in other areas.

KEY FEATURES OF THE BALANCE SHEET MODEL

The balance sheet model is focused on the recognition and measurement of wealth. Under this model, profit and its components are secondary concepts. In the balance sheet's scheme of things, profit is determined as a measure of change in net assets. The model seeks to ensure that only genuine assets and liabilities appear on the balance sheet. Some noteworthy features of the balance sheet model may be summarized as follows :

- It makes the balance sheet the central focus of accounting. The model is centred on the definitions, recognition and measurement of assets and liabilities. The definitions of assets and liabilities are used as the basis for controlling the definitions of other financial statement elements. Under the balance sheet model, revenues and expenses play only a secondary role. They are defined by reference to movements in assets and liabilities.
- Under the balance sheet view, assets are defined in terms of economic resources. An asset is an economic resource that represents potential future benefits. Liabilities under this view are obligations to transfer economic resources to third parties.
- Ownership equity under the balance sheet approach to accounting is the difference between assets and liabilities. The profit disclosed in the profit and loss account is the net movement in the period in the values of assets and liabilities

recognized in the balance sheet. Thus the measurement of profit is dependent upon the measurement of the values of assets and liabilities.

- The balance sheet model is designed to maintain the conceptual purity of balance sheet presentations. It includes in the balance sheet only those items that meet the definitions of assets, liabilities and ownership equity. Costs can be carried forward only if they represent assets; provisions can be created only if they represent real obligations to transfer economic benefits to external parties.
- It promotes economic substance over legal form.

ACHIEVEMENTS TO DATE

The balance sheet model is operational. It has proved its usefulness. It has solved many outstanding problems of financial accounting and reporting. The adoption of the balance sheet model has greatly improved the quality of corporate financial reporting. It has provided accounting standard-setters with a legitimizing foundation for their pronouncements. With the help of this model they have been able to eliminate many inferior and abusive accounting practices. The asset-liability view has provided a new approach to analysis of transactions and a new way of looking at the economic events and phenomena of businesses. Some specific achievements of the balance sheet model are mentioned below :

- The balance sheet approach has provided clearer answers to many corporate financial accounting and reporting questions compared with the matching approach. With this approach accounting standard-setters have been able to tackle some of the crucial problems accountants are facing today.
- It has increased the visibility of assets and liabilities in the balance sheet. The balance sheet now recognizes many items of assets and liabilities which hitherto have been excluded from it. This has been possible due to the adoption of the new definitions and new recognition criteria.
- By restricting the role of matching, the balance model has substantially reduced the scope of manipulation of periodic profits.
- In the UK, the ASB has been able to restore to a significant extent the damage done to corporate financial reporting by off balance sheet financing and other creative accounting

devices by adopting the new approach. This is considered to be a great achievement.

- It is due to the increasing emphasis on the balance sheet that there has been greater tendency to report assets and liabilities on the balance sheet at their current values. The principle of current value measurement has been extended to several categories of assets and liabilities. Accounting standard setters appear to be keen on bringing all financial assets under the purview of current value measurement. They are also actively considering the proposal of bringing certain non-financial assets for which there are readily ascertainable market prices under the purview of current value measurement.
- It has eliminated to a great extent the excessive bottom-line mentality by drawing attention to more fundamental aspects of the value-creating activity of enterprises. The balance sheet model is concerned more with the value-creating sources than with striking the final profit figure.

The balance sheet model has still many conflicting issues to resolve. If the balance sheet model is to operate efficiently and effectively, the principle of market value accounting should be comprehensively applied to all assets and liabilities. Accounting standard setters have not yet been able to develop a coherent framework for dealing with the valuation issue. Currently, they are trying to solve the valuation problems on a piecemeal basis. They are doing this because they do not want a sudden overturning of most of what accountants now do.

Current value measurement has some problems. But those problems are not insurmountable. There appear to be no fundamental difficulties that might impede the exercise. Current value measurement is generally opposed on the ground that it lacks objectivity. Nowadays, the traditional view of objectivity is being increasingly questioned. Efforts are now being made to re-engineer the traditional transactions-oriented objectivity concept. If current value information is generated based on an agreed framework, such information can very well form the basis of preparation and presentation of financial statements. The IVSC is now actively involved in the various projects it has undertaken in order to develop valuation guidelines and formulate valuation standards. If the mission of this international organization is successful, it will significantly lessen the burden of accounting standard-setters. They will then be able to use those valuation standards in writing their own accounting rules.

Many are opposed to market value accounting for fear that this might lead to uncontrollable volatility in reported profits. The fear is not unfounded. Market value accounting causes volatility in reported profits. But if volatility is the underlying economic reality, the accounts should reflect that. Users of financial statements might be misled by artificial profit smoothing.

Maximizing shareholder value is increasingly being regarded as the ultimate goal of company management. A large number of companies have already accepted shareholder value maximization as the appropriate goal for determining their business strategies and in assessing their performance. The idea is now being promoted that corporate financial reporting should focus on this value-creating activity of management. But how can this be done? Surely, historical cost-based measurement system is unable to capture the essence of this value-creating process. To capture this, a current value measurement framework is necessary.

As has repeatedly been mentioned, the balance sheet model is focused on assets and liabilities. Since liabilities are mirror image of assets, the emphasis naturally has come to be laid on the latter. The new definition of assets is based on the concept of *resources*. An item should be economic resource if it is to qualify as an asset. By placing emphasis on the resource notion, accounting standard-setters have opened up a new front. *Economic resource* is a very broad term, which is interpreted differently in different contexts. Clear specifications are needed as to how the term should be interpreted in the context of accounting. In the absence of such specifications, the definition of assets becomes somewhat vague or ambiguous. The current definition does not offer clear indication of when and how an asset becomes an asset for accounting purposes. It is necessary to fine tune the definition.

Accounting standard-setters have endeavoured to solve the problem of vagueness associated with asset definition by introducing a set of recognition criteria. These recognition criteria appear to be too restrictive and they appear to be heavily influenced by the notion of conservatism. Currently, there is a significant gap between the definition of assets and their recognition criteria. This is not a healthy state of affair. The gap should be narrowed down.

IS BALANCE SHEET THE RIGHT ANSWER ?

The balance sheet model has its critics. They are skeptical about the ultimate success of the model. The effectiveness of an

accounting model depends on its ability to contribute to improved accounting. Improved accounting means more transparency. In the context of financial reporting, transparency means "the ability to see far enough and clearly enough into a company's financial statements to judge accurately what it is worth and how well it is doing" (Stewart, 2001, p. 270-71). Transparent financial statements are those that reflect what is actually going on within the enterprise. Lack of transparency in corporate financial reporting is detrimental to society. It leads to misallocation of resources. Lack of transparency erodes the confidence of investors, which is highly damaging. Greater transparency in financial statements is required because it facilitates the objective of corporate financial reporting, which is to provide users with information useful for making rational economic decisions. Financial statements should reflect faithfully the underlying economic realities of the events and phenomena of the enterprise.

Lack of transparency in corporate financial reports may result due to a variety of reasons. One of the reasons why transparency in corporate financial reporting might be vitiated is non-generation or inadequate generation of information. There is information but accounting may not be able to generate it, or generate it in a proper way, if there are inadequacies and imperfection in accounting concepts and principles. Transparency might be vitiated if accounting concepts and principles are applied in a wrong way to generate information. Lack of transparency in corporate financial reporting might also result if information is deliberately withheld or provided in a wrong way.

One of the criticisms of current accounting model is that it does not fully capture the resources that make new economy enterprises valuable. The situation has not changed much even after the introduction of the balance sheet model. It is true that the balance sheet model has solved some of the accounting problems of new economy businesses, but major ones persist. Currently, the balance sheet model is operating within the broad framework of the industrial-age accounting. But this framework is inadequate to deal with the problems of the new economy businesses. The industrial-age accounting framework lacks even the context necessary to conceive of the accounting problems these businesses are facing. Industrial-age accounting focuses on machines, materials and certain other traditional assets. It is unable to account for the wealth-generating assets of modern knowledge-based enterprises because most of their assets are intangible and immaterial. The current position seems to be highly unsatisfactory. It is an unsatisfactory state of

affair that enterprises have important value-generating assets but accounting fails to capture and report them in a proper way. According to Stewart (2001, p.269), "generally accepted accounting principles generally do an unacceptable job of accounting for the principal activities of knowledge companies". This anomaly has to be removed if the balance sheet model is to operate efficiently and effectively. But meeting this challenge is not going to be easy. The problem is daunting, but it is not beyond hope. What accountants should do first is to develop the context necessary to understand the nature of the wealth-generating assets of the new economy businesses. These assets do not behave in the way that traditional assets do. In any case, if the problems of intangibles are to be solved, they have to be solved with the balance sheet model. The matching-based model is totally inadequate for this purpose.

Another area where the balance sheet model has failed to make strides is accounting for innovative financial instruments. Many of these innovative financial instruments involve arrangements that enable enterprises to procure finance without the involvement of the balance sheet. Accounting standard setters are trying to solve the problems by focusing on the asset-liability model and by invoking the fair value measurement framework, but problems persist. New approaches and new techniques are required to solve these problems. In this area also the matching-based approach has virtually nothing to offer.

CAN DISCLOSURES BE A REMEDY?

As has been seen earlier, accounting disclosures provide a useful means for expanding the information content of published financial reports. Informative disclosures benefit all financial statement users. If disclosures are informative, it should improve the evaluation of risk and return of enterprises. Additional disclosures contribute to an improvement in the ability of the capital market to establish prices of corporate securities that reflect their values. Financial statements are unable to incorporate soft and judgemental data. But if these data are judged to be price sensitive, they may be provided on a supplementary basis outside those statements. Disclosures route appears to be the only alternative when significant wealth-generating assets of an enterprise cannot be recognized in its accounts because of their failure to meet the criteria for recognition. Similarly, an enterprise may choose the disclosures route to provide information about the obligations that are not

recognized in its balance sheet. In recent years, accounting standard setters have put increasing emphasis on additional disclosure as a means of overcoming the inadequacies and limitations of financial statements. This is evident in the growing number of disclosure-related accounting pronouncements. The increasing emphasis on disclosures has resulted in a substantial expansion in the information contents of published annual reports of enterprises.

But additional disclosures have some difficulty. They add to the length of financial reports. As the volume of disclosures expands, the reports tend to become lengthy. Added disclosures may even lead to information overload. There are limits to the ability of financial statement users to assimilate and process additional information. If information exceeds those limits, the additional information cannot be processed or assimilated. Information overload may impinge on the ability of users to take good decisions.

There is a qualitative difference between the information that is provided in the basic financial statements and that provided on a supplementary basis outside those statements. Disclosures outside the basic financial statements do not amount to recognition. Where recognition and measurement are called for, the requirement cannot be met by disclosures. Recognition and measurement are the most crucial aspects of generation of financial statements. Disclosures are not a proper substitute for recognition and measurement. Disclosures may add to information content, but they cannot rectify wrong or inappropriate treatment for items in the basic financial statements.

FINAL COMMENTS

The relevance of the matching approach has long been lost. The approach is conservative and backward-looking. It is incapable of capturing the essence of the dynamism characterizing modern business enterprises. We need a more dynamic forward-looking framework to capture the essence of the process of business value creation in the emerging information-age economy. The balance sheet model, it is believed, is able to provide such a framework. This model is forward-looking. It focuses on the parameters of wealth creation. The building blocks of the model are assets and liabilities. In this highly dynamic business environment wealth mapping is considered to be of far greater importance than counting the amount of profit. Wealth is the connecting link between the present and the future. The information generated by the balance sheet-driven system is considered to have high predictive value. This information

is also considered to have high relevance in the context of evaluation of the adaptive capacity of the enterprise. Of course, there are some problems with the balance sheet model. But those problems can be solved through detailed experimentation and research.

Accounting is passing through a difficult time. Some say that almost a state of crisis has been reached. Financial reporting scandals one after another have greatly shaken the foundation of accounting. They have also greatly tarnished the image of the whole accounting institution. Many of these scandals (eg, Enron, World Com) have surfaced in the US which, seemingly, has the most effective and efficient accounting regulatory system in the world. Today, fundamental questions are being asked about the appropriateness of accounting principles and rules. The integrity of the accounting profession is also being questioned. The pressure for change continues to mount. Accounting regulatory agencies are being pressurized into taking appropriate remedial measures before the crisis deepens and the situation gets out of control. In the US, the government is due to pass stringent legislation for regulating the country's accounting profession. The FASB is also contemplating reorienting its approach to standard-setting. Robert Hertz, the current FASB chief, believes that the current crisis is an opportunity to make much needed changes. It now remains to be seen how the FASB sets about formulating its reform agenda and rebuilding its accounting house. The way in which the FASB writes its financial reporting requirements will have far reaching implications for the rest of the accounting world. Whatever approaches the FASB adopts, it will ultimately have to go back to the basics. And that will certainly call for strengthening its commitment to the balance sheet. This is truly the need of the hour.

Notes and Bibliography

NOTES

CHAPTER ONE

1. The terms *profit* and *income* are used in this study interchangeably. Also used interchangeably are the terms *profit and loss account* and *income statement*. According to some accounting writers (eg, Goldberg, 1952; Norris, 1946), profit and income are two distinct concepts and as such they cannot be used interchangeably. But modern accounting writers do not make any distinction between these two terms.
2. A paradigm is a model or image for something. Operationally, it is defined as "a fundamental image of the subject matter within a science. It serves to define what should be studied, what question should be asked, how they should be asked and what rules should be followed in interpreting the answers obtained" (Ritzer, 1975). For further details concerning the ways in which the term is used, see Kuhn, (1970).
3. The term *market capitalization* refers to the value that the capital market places on a company. It is the total value at market prices of the outstanding equity shares of the company.
4. David Neal (1996, p. 2) considers this legislation to be the first piece of "investors protection legislation which expressed the need among the owners of capital to be protected from various scams of the early parts of the Industrial revolution".
5. Weilenmann (1977) provides an excellent survey of Besta's contribution to the development of accounting thought. The present summary is based on this survey.
6. Flower (1996, p. 201) describes Schmalenbach as a great accounting hero of Continental Europe.
7. The US Financial Accounting Standards Board (FASB) is the undisputed world leader in the matter of development of financial accounting and reporting standards. Other leading accounting standard-setting bodies include the Australian Accounting Research Foundation (AARF), the Canadian Institute of Chartered Accountants (CICA), the UK Accounting Standards Board (ASB), and the International Accounting



Standards Committee (IASC). More recently, the IASC has been replaced by the International Accounting Standards Board (IASB). The new body has been formed with a clear mandate to promote convergence on a single set of high quality, understandable and enforceable global accounting standards. It will write its accounting standards in the name and style of *International Financial Reporting Standards (IFRSs)*.

CHAPTER TWO

1. There exists a controversy as to the real status of the concept of matching even in the context of the profit and loss account-oriented system of accounting. Some say it is a fundamental principle of accounting, while others maintain that it is simply a particular way of computing periodic profits.
2. An alternative approach to viewing revenue is to treat it as an outflow of resources. According to this view, revenue is the monetary expression of the products and services that are transferred by an enterprise to its customers.
3. The AAA Committee on Concepts and Standards for External Financial Reports (AAA, 1977) has described the *Paton and Littleton Monograph* as one of the most important contributions to financial accounting of the twentieth century.
4. Conservatism is often viewed as a constraining principle because it imposes limitations upon financial statements.
5. The realization notion originally came into existence as a means of protecting creditors from uncertainties that arise in accrual accounting, and its purpose was to try to ensure that profits were not overstated and that there was sufficient cash available to distribute those profits without the company being insolvent (ASB, 1999, paragraph 47).
6. There is a substantial literature on profit smoothing. Gordon et al. (1966) represents a pioneering study in this area. For detailed references to the profit or income smoothing literature, see Watts and Zimmerman (1986).

CHAPTER THREE

1. The stewardship role of financial reporting can also be seen from the agency theory perspective. According to this theory, managers are the agents and shareholders the principals.

- Shareholders need information to monitor compliance with the terms and conditions of various contracts with their managers.
2. The previous British requirement was that of giving a *true and correct* view. In the 1947 Act, the word *correct* was replaced by the word *fair*.
 3. The matter is elaborately discussed in Revsine (1973).
 4. Examples include banks, fund management companies and other non-banking financial institutions.
 5. For a detailed analysis of how different combinations of capital maintenance and capital valuation leads to different measures of profits, see Basu (1984).
 6. The UK accounting standard FRS 4 (ASB, 1993) addresses the issue of how the debt and equity components of hybrid financial instruments should be separated. The standard has been issued in order to clamp down on hybrid financial instruments which are popularly described as "balance sheet gimmicks".
 7. For further details about G 4+1 proposals, see Johnson (1998, p.71), *Management Accountancy* (December, 1999), and Basu (2001). The position and status of the G4+1 group of accounting standard-setters is discussed in Foot Note No. 4 to Chapter Five.

CHAPTER FOUR

1. The Chartered Institute of Management Accountants, London, UK.
2. The term *exit value* was first coined by Edwards and Bell (1961, p. 79).
3. The term *deprival value* was coined by the British accounting academician William Baxter. He defined deprival value as the "lower of replacement cost or expected direct benefits". For further details, see Baxter (1971).
4. There can be six possible relationships between RC, NRV and NPV. These are :

$NPV > NRV > RC$
 $NPV > RC > NRV$
 $NRV > NPV > RC$
 $NRV > RC > NPV$
 $RC > NPV > NRV$
 $RC > NRV > NPV$

5. Mezzanine finance is a loan that ranks behind other loans and is convertible into equity shares at a predetermined rate.
6. The leverage buyout refers to a change of corporate control through the use of debt. It is a method of acquiring control of a company where equity is largely replaced by various forms of debt.
7. The International Valuation Standards Committee (IVSC) is an unincorporated association comprising professional valuation associations from about 50 countries. The principal objective of the IVSC is to formulate and publish, in the public interest, valuation standards and procedural guidance for the valuation of assets for use in financial statements.

CHAPTER FIVE

1. There are some countries (eg, Austria and Germany) where taxable profits and accounting profits are computed using identical rules and principles. In these countries, tax accounting is a fairly straightforward job.
2. Vesting is an employee's right to pension benefits regardless of whether the employee remains with the company or not.
3. Big bath accounting refers to a practice whereby huge provisions are created for reorganization and then fed back into profits over a number of years.
4. The G 4+1 group of accounting standard setters, which comprises the standard-setting bodies from Australia, Canada, New Zealand, the UK and the US (representatives of the IASC attend as observers), was originally set up as a forum for discussing accounting issues. It soon earned the reputation as a club for the standard setters. The group has published papers on many key areas of financial reporting. For further details concerning G 4+1 proposals, see *Accountancy* (April, 2000). At its meeting held in London on January 30 - February 1, 2001, the group decided to disband and cancel its planned future activities. The group noted that a successful restructuring of the IASC to create an IASB designed to include an active partnership with national standard-setters would obviate the need for G 4+1.
5. For a comprehensive discussion of the rationale behind company share option schemes, see Casson (2000).
6. Some are inclined to believe that granting share options is not remuneration. For an example of this viewpoint, see Dyson (2001, p. 97).



7. For further details of the IASB proposal, see *Accountancy*, September 2002, p. 90.
8. Source: *Accountancy*, January 2002, p. 11.

CHAPTER SIX

1. Invisible assets are another name for intangible assets. They are called invisible because they do not appear on the financial statements.
2. Infosys Technologies Ltd. *Annual Report*, 2001-02.
3. The Tobin's q was originally introduced for use as a predictor of a company's future investments.
4. For further details, see Teece (2000).
5. A year later (ie, by the end of 2000), the value of Microsoft reduced to \$217bn. But even then the ratio of market value to book was considerably high. For further details, see Flower (2002, chapter 20).
6. London Business School, *Business Strategy Review*, 1999 (quoted in Skyrme, 1999).
7. Source : Palepu et al. (2000, pp. 4-7).
8. Source : *Accountancy*, August, 2001, p. 47.
9. For more on goodwill accounting practices of countries, see Basu (1998).
10. *Interbrand*
11. Source : *Interbrand* (quoted in Saudagaran, 2001, p.100).
12. According to an estimate made by Lev (1999), for the US pharmaceutical industry \$1 of R & D expenditure leads to future profits of \$2.63.
13. Celemi represents world's first audit of intangible assets as part of the company annual report. The publication was brought about in 1995 (Elliott and Elliott, 2002, p. 484).

CHAPTER SEVEN

1. The term *creative accounting* is used in the finance and accounting literature in a bad sense. A person is creative if he or she has the ability to invent and develop original ideas. Accountants demonstrate their creativity by inventing and developing ideas intended to be used for manipulating financial results. For further elaboration on this theme, see Basu (1998a).

2. For a broader explanation of different forms of off balance sheet financing, see Basu (1998) and Peasnell and Yaansah (1998).
3. Financial assets (securities) are contractually created assets. The contracts that give rise to financial assets represent agreement about the exchange of money in the future.
4. A nice account of the process of securitizing human capital is given by Meyer (2000, chapter 5).
5. Bearings, a British merchant bank provides an example of misuse of derivatives. The bank lost over £800m on the Japanese share index contracts and on the Singapore and Osaka derivatives exchanges, leading to the collapse of the bank in 1995.
6. This analogy is used in *Harvard Business Review* analysis of derivatives (January-February, 1995, p. 35).
7. A useful description of the notion of *substance over form* will be found in Rutherford (1988).
8. Hedging, for accounting purposes, means "designating a derivative or non-derivative financial instrument as an offset in net profit or loss, in whole or in part, to the change in a hedge item's fair value or cash flows". Put another way, hedging is investing in an asset with a payoff pattern that offsets exposure to a particular source of risk.

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